Division of Transportation

Martin G. Buehler, P.E.
Director of Transportation/County Engineer

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LakeCounty

May 30, 2008

Illinois Environmental Protection Agency, DWPC
Compliance Assurance Section
1021 North Grand Avenue East, POB 19276
Springfield, Illinois 62794-9276

Dear Sir / Madam:

Please find enclosed two (2) signed copies of our MS4 Annual Facility Inspection Report for Permit Year 5: March 2007 to March 2008. This report is specific to Permit Number ILR400517 with your agency.

It is our understanding that this submittal meets the Year 5 requirements for the National Pollution Discharge Elimination System (NPDES) Phase II permit program for Lake County. Please do not hesitate to contact me if you have any questions or if you should have a need for additional information.

Very truly yours,

Al Giertych, P.E.
Assistant County Engineer
agiertych@co.lake.il.us

Lake County, Illinois
MS4 Annual Facility Inspection Report

Illinois Environmental Protection Agency
National Pollutant Discharge Elimination System Phase II

Permit Year 5: March 2007 to March 2008

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
ANNUAL FACILITY INSPECTION REPORT
NPDES PERMIT FOR STORM WATER DISCHARGES
FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)

Website address: http://www.epa.state.il.us/water/permits/storm-water/forms/annual-facility-inspection-ms4.pdf

Complete each section of this report.

REPORTING PERIOD FROM: MARCH, 2007	TO: MARCH 2008	ILR40 0517

MS4 OPERATOR INFORMATION: (As it appears on the current permit)

NAME: Lake County		TELEPHONE NUMBER: 847-377-2234	
MAILING ADDRESS: 18 North County Street			
CITY: Waukegan	STATE: IL	ZIP: 60085	COUNTY: Lake
CONTACT PERSON: (Person responsible for Annual Report)	Mr. Gary Gibson, Assistant County Administrator		

NAME(S) OF GOVERNMENTAL ENTITY(IES) IN WHICH MS4 IS LOCATED: (As it appears on the current permit)

Lake County, Illinois	

THE FOLLOWING ITEMS MUST BE ADDRESSED.

A. CHANGES TO BEST MANAGEMENT PRACTICES (check appropriate BMP change(s) and attach information regarding change(s) to BMP and measurable goals.)

1. Public Education and Outreach	☑	4. Construction Site Runoff Control	☑
2. Public Participation/Involvement	☑	5. Post-Construction Runoff Control	☐
3. Illicit Discharge Detection & Elimination	☑	6. Pollution Prevention/Good Housekeeping	☑

B.
Attach the status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and your identified measurable goals for each of the minimum control measures.

C.
Attach results of information collected and analyzed, including monitoring data, if any during the reporting period.

D.
Attach a summary of the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule.)

E.
Attach notice that you are relying on another government entity to satisfy some of your permit obligations (if applicable).

F.
Attach a list of construction projects that your entity has paid for during the reporting period.

SIGNATURE:	DATE: 5-28-08

Please submit inspection reports to:

Illinois Environmental Protection Agency, DWPC
Compliance Assurance Section
1021 North Grand Avenue East, POB 19276
Springfield, Illinois 62794-9276

Information required by this form must be provided to comply with 415 ILCS 5/39 (1996). Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

IL 532 2585
WPC 691 REVISED JUNE 2005

Contents

Part A. Changes to Best Management Practices

Note: **X indicates BMPs performed that were proposed in your NPDES permit**
✓ indicates changes to BMPs proposed in your NPDES permit

Year 1	Year 2	Year 3	Year 4	Year 5	MS4
A. Public Education and Outreach					
X	X	X	X	X	A.1 Distributed Paper Material
	X	X	X	X	A.2 Speaking Engagement
	✓	✓	✓	X	A.3 Public Service Announcement
X	X	X	✓	X	A.4 Community Event
					A.5 Classroom Education Material
					A.6 Other Public Education
B. Public Participation/Involvement					
		✓	✓	X	B.1 Public Panel
		✓	✓	X	B.2 Educational Volunteer
X	X	X	X	X	B.3 Stakeholder Meeting
X	X	X	X	X	B.4 Public Hearing
X	X	X	X	X	B.5 Volunteer Monitoring
					B.6 Program Coordination
					B.7 Other Public Involvement
C. Illicit Discharge Detection and Elimination					
	✓	✓		X	C.1 Storm Sewer Map Preparation
X	X	X	X	X	C.2 Regulatory Control Program
	X	X	✓	X	C.3 Detection/Elimination Prioritization Plan
		✓	✓	X	C.4 Illicit Discharge Tracing Procedures
		X	X	X	C.5 Illicit Source Removal Procedures
			✓	✓	C.6 Program Evaluation and Assessment
		✓	✓	X	C.7 Visual Dry Weather Screening
			✓	✓	C.8 Pollutant Field Testing
	✓	✓	✓	X	C.9 Public Notification
					C.10 Other Illicit Discharge Controls

Year 1	Year 2	Year 3	Year 4	Year 5	MS4
D. Construction Site Runoff Control					
X	X	X	X	X	D.1 Regulatory Control Program
X	X	✓	✓	X	D.2 Erosion and Sediment Control BMPs
X	X	✓	✓	X	D.3 Other Waste Control Program
X	X	X	X	X	D.4 Site Plan Review Procedures
X	X	X	X	X	D.5 Public Information Handling Procedures
X	X	X	X	X	D.6 Site Inspection/Enforcement Procedures
	X	X	X	X	D.7 Other Construction Site Runoff Controls
E. Post-Construction Runoff Control					
					E.1 Community Control Strategy
X	X	X	X	X	E.2 Regulatory Control Program
X	X	X	X	X	E.3 Long Term O&M Procedures
X	X	X	X	X	E.4 Pre-Const Review of BMP Designs
X	X	X	X	X	E.5 Site Inspections During Construction
X	X	X	X	X	E.6 Post-Construction Inspections
					E.7 Other Post-Const Runoff Controls
F. Pollution Prevention/Good Housekeeping					
X	X	X	X	X	F.1 Employee Training Program
✓	X	X	X	X	F.2 Inspection and Maintenance Program
✓	X	X	X	X	F.3 Municipal Operations Storm Water Control
✓	X	X	X	X	F.4 Municipal Operations Waste Disposal
					F.5 Flood Management/Assess Guidelines
✓	X	X	X	X	F.6 Other Municipal Operations Controls

Provide information regarding changes to BMPs and measurable goals for Year 5 here. Suggested format shown below.

Changes to BMPs and measurable goals for Year 5

C.6.1 Program Evaluation and Assessment

Measurable Goals: Evaluate and assess the effectiveness of IDDE procedures and processes that have been implemented.

Status: Sufficient progress has not been made on IDDE inspections to evaluate their effectiveness. This measure will be carried over into Year 6 of the program.

C.8.1 Pollutant Field Testing

Measurable Goals: Number of apparent illicit discharges field tested for pollutants.

Status: Initial visual dry weather storm sewer outfall screening conducted during Year 5. Sufficient progress has not been made on the use of field testing equipment for pollutants. This measure will be carried over into Year 6 of the program.

Part B. Status of Compliance with Permit Conditions

The status of BMPs and measurable goals performed in Year 5 is described below.

1. Public Education and Outreach

Lake County committed to conduct Public Education and Outreach as part of its permit. Public Education and Outreach requires implementation of a program to distribute educational material to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants to storm water runoff. Lake County committed to implementation of BMPs related to A.1, A.2, A.3 and A.4 as described below.

A.1.1 Distributed Paper Material

Lake County will distribute publications received from SMC to local target groups.

Measurable Goals: Make available and distribute two manuals "A Citizen's Guide to Maintaining Stormwater Best Management Practices" and "Living with Wetlands: A Handbook for Homeowners in Northeastern Illinois" to local entities such as homeowners associations and stakeholder groups.

Status: Publications made available and distributed as described.

A.1.2 Distributed Paper Material

The Lake County Department of Planning, Building and Development will distribute educational materials on a variety of storm water quality topics to targeted groups.

Measurable Goal(s), including frequencies: The Lake County Planning, Building and Development Department will make available and distribute the following publications to permit applicants, developers, homeowner groups and any other interested groups or individuals.

"Silt Fences & Straw Bale Barriers" – Erosion control best practices.
"Site Development Permits" – Natural resource issues related to site development.
"Wetlands" – General regulatory information as it relates to site development.
"Floodplains" – General regulatory information as it relates to site development.
"Soil Erosion & Sediment Control" – General regulatory information as it relates to site development.
"Septic Systems" – Site development requirements.
"Swales" – Site development requirements.

Status: Publications made available and distributed as described. All of the publications were formally reviewed and revised for accuracy during Year 5.

A.1.3 Distributed Paper Material

The Lake County Health Department will distribute educational materials on a variety of stormwater quality topics to targeted groups.

Measurable Goal(s), including frequencies: The Lake County Health Department will make available and distribute the following publications related to natural resources and water quality management.

"Cattail Chronicles" – A quarterly newsletter published by the Lakes Management Unit of the Environmental Health Division of the Lake County Health Department dedicated to public education on water quality issues specific to Lake County.
"Wastewater News" – A biannual newsletter.
"Waterlines" – A water well newsletter targeting licensed well contractors.
"National Groundwater Awareness Week" – Since 1999 the Lake County Health Department has issues a press release and reduced water analysis fees for private well samples during this annual observance. In 2006, Lake County expanded the reduced-fee tests available and produced a pamphlet explaining common water testing parameters.

"National Recreational Water Illness Prevention Week" – New in 2006, the lake County Health Department is highlighting the value of healthy swimming and recreational water illness prevention.
"Private Water Well Testing" – Publication.
"Types of Wells in Lake County" – Publication.
"Frequently Asked Questions about Water Wells" – Publication.
"Well Chlorination Procedures" – Publication.
"Investigate Before You Invest in a Vacant Lot" – Publication.
"Investigate Before You Invest in a Home" – Publication.
"Wastewater Treatment and Dispersal by Onsite Wastewater Treatment Systems" – Publication.
Numerous water related press releases *(i.e. Reduce Outdoor Water Use During Drought)*
"Lake Reports" – An annual report issued by the Lakes Management Unit of the Environmental Health Division of the Lake County Health Department. Report contains detailed information on the environmental health of 22 different lakes in Lake County.
"Buffer Strips – Why they should be part of your shoreline" – Best management practices for planting and maintaining shoreline property.
"Phosphorous in Lake County" – Educational brochure on limiting the use of phosphorous.

Status: Publications made available and distributed as described (Example of "Cattail Chronicles" publication attached).

A.2.1 Speaking Engagement

Lake County will make employees available for speaking engagements to groups of interested residents on storm water related topics. This program will be administered by the Communications Department of the Lake County Administrator's Office.

Measurable Goal(s), including frequencies: The Lake County Communications Department will arrange to provide public speakers on storm water related topics through it's "Speakers Bureau". These services are provided upon request from interested public groups. Speakers are Lake County employees and are selected based upon their expertise on a requested topic.

Status: During Year 5 of this program the Lake County Health Department Lakes Management Unit spoke with numerous public groups about storm water runoff and lake quality. Over 175 lake reports are currently accessible via the Lake County Health Department website as well as other storm water educational information including a publication entitled "Phosphorous in Lake County" and information on phosphorous free fertilizers.

A.3.1 Public Service Announcement

Lake County will plan to air one or more public service announcements on the local cable access channel run by Lake County (LCTV). Citizen participation in preserving storm water quality will be the focus.

Measurable Goals: Number and quality of PSA's aired. Public response and feedback to PSA's.

Status: In addition to earlier efforts by the Lake County Health Department to broadcast program segments on controlling the effects of de-icing chemicals in storm water runoff, Lake County held a first-ever Lake County Water Resources Planning Group forum in which more than 150 representatives from local government came together to begin the dialogue on the critical issue of water resource protection in Lake County and to discuss developing a long-term water resource plan to ensure that there is an adequate, sustainable supply of safe water in the future. One aspect of this effort was the production and airing of a special five-part video series entitled "Save Water for Our Future" which has been placed into the programming schedule and has aired on Lake County TV (LCTV), the local access cable channel run by Lake County.

A.4.1 Community Event

A soil erosion and sediment control workshop will be sponsored by the QLP and conducted on a bi-annual basis. This workshop is geared toward developers, engineers, municipalities and enforcement officers. Lake County will participate in the bi-annual workshop.

Participate in local initiatives directed at improving water quality.

Measurable Goal(s): Participate in the bi-annual soil erosion and sediment control workshop. Participation in locally sponsored efforts to improve water quality.

Status: Lake County participated in the bi-annual soil erosion and sediment control workshop sponsored by the QLP during Year 5.

2. Public Participation/Involvement

The MS4 will perform activities and services related to the Public Participation/Involvement minimum control measure. BMPs will be implemented under BMP numbers B.1, B.2, B.3, B.4 and B.5 as described below.

B.1.1 Public Panel

Measurable Goals: Involvement on public panels. Number of meetings attended / degree of participation. Representatives from the lake County Department of Planning, Building and Development and the Lake County Division of Transportation will continue to serve on the SMC Technical Advisory Committee (12 meetings) and the SMC Municipal Advisory Committee (12 meetings) during Year 5.

Status: Lake County actively participated in public panels as described during Year 5.

B.2 Educational Volunteer

Measurable Goals: Participate as a presenter at locally sponsored educational seminars on storm water quality issues. Lake County staff will participate in the organization and presentation of educational seminars sponsored by the Lake County Branch of the Chicago Metro Chapter of the American Public Works Association and the Lake County Storm water Management Commission on storm water quality topics in Lake County in Year 5.

Status: Lake County staff (Environmental Health Division of the Lake County Health Department; Planning & Development Department; Division of Transportation) regularly participated in various public meetings and forums to provide information and public education on storm water quality issues and topics during Year 5.

B.3.1 Stakeholder Meeting

Stakeholder meetings are conducted throughout the county for ongoing planning and project implementation efforts. When stakeholder groups (such as watershed planning committees) include the jurisdictional area of the MS4, the MS4 will publicize stakeholder meetings locally and participate by being represented at the stakeholder meetings.

Measurable Goals: Publicize and participate in relevant watershed planning committees and other stakeholder groups such as:

- Chicago Wilderness Aquatic Task Force
- Barrington Area Council of Governments (BACOG) – Water Quality Committee
- NIPC Water Supply Task Force and Water Quality Task Force for the 2002 NIPC Strategic Plan for Water Resource Management
- Lake County Framework Plan and Unified Development Ordinance Committees regarding water supplies and water quality
- Fremont Township Well Committee
- Indian Creek Watershed Committee
- Fish Lake Drain Watershed Committee
- Upper Des Plaines River Watershed Committee
- Flint Creek Watershed Committee
- Squaw Creek Watershed Committee
- Sequoit Creek Watershed Committee
- North Chicago Watershed Committee
- Waukegan River Watershed Committee
- ISD (Onsite Wastewater) Steering Committee

- Management entities for individual lakes in Lake County (Homeowners Associations, Villages and/or Townships).

Status: Lake County staff and elected officials actively participated in water resource stakeholder meetings as described during Year 5. New in Year 5 was the formation of the Lake County Water Resources Planning Group.

B.4.1 Public Hearing

Lake County will meet its own requirements for conducting a variety of public meetings or hearings on issues that are related to preserving storm water quality.

Measurable Goal(s), including frequencies: The following types of public meetings or hearings will be held in Year 5 and will often include agenda items that are related to storm water quality:

Lake County Board – The Lake County Board meets each month to conduct the business of Lake County. These meetings are open to the public and are broadcast on local cable television access. The County Board also has a number of working committees that members serve on which meet regularly and are also open to the public.

Zoning Board of Appeals – The Zoning Board of Appeals holds public hearings to consider applications for rezoning, conditional use permits and requests for variation and administrative appeals. All meetings of the Zoning Board of Appeals are open to the public.

Regional Planning Commission – The Regional Planning Commission is an advisory group to the Lake County Board on issues related to land development. The Commission meets twice monthly. All meetings of the Commission are open to the public.

Lake County Stormwater Management Commission – Lake County Board members comprise six of twelve representatives on this commission. The Commission has the responsibility for implementing the Comprehensive Storm water Management Plan for Lake County which was previously adopted jointly by the Lake County Board and the Commission in 1990. The Commission meets monthly and all meetings are open to the public. The Lake County Storm water Management Commission serves as the Qualifying Local Program (QLP) for this submittal.

Technical Advisory Committee / Lake County Stormwater Management Commission – This is a working committee of representative staff from local government and private development interests in Lake County. Lake County has representatives from it's Department of Planning, Building and Development and Division of Transportation that serve on this committee. The Technical Advisory Committee meets once each month and all meetings are open to the public.

Municipal Advisory Committee / Lake County Stormwater Management Commission – This is a working committee of representative staff from local government interests in Lake County. Lake County has representatives from it's Department of Planning, Building and Development, Health Department and Division of Transportation that serve on this committee. The Municipal Advisory Committee meets once each month and all meetings are open to the public.

Status: Lake County has conducted and participated in regularly scheduled public meetings throughout Year 5 as described above.

B.5.1 Volunteer Monitoring

"Lake County Adopt-A-Highway Program"

Measurable Goal(s), including frequencies: Volunteer groups "adopt" a section of County Highway and agree to remove litter twice each year. Program is managed by the Lake County Division of Transportation.

Status: During Year 5 of the program, the Lake County Division of Transportation enlisted over 200 different volunteer groups to regularly remove litter and trash from various County Highways throughout Lake County.

3. Illicit Discharge Detection and Elimination

The MS4 will perform activities related to the Illicit Discharge Detection and Elimination (IDDE) minimum controls. The majority of these activities will be related to IDDE program design. The requirements of an

IDDE program include the following:

- Develop a storm sewer system map that shows the locations of all outfalls and the names and locations of all water of the US that receive discharges from those outfalls.
- Prohibit non-storm water discharges into the storm sewer system and implement appropriate enforcement procedures and actions.
- Develop and implement a plan to detect and address illicit discharges into the storm sewer system.
- Educate public employees, businesses and general public of hazards associated with illegal discharges and improper disposal of waste.
- Identify the appropriate best management practices and measurable goals.

BMPs will be implemented under BMP numbers C.1, C.2, C.3, C.4, C.5, C.6, C.7, and C.9 as described below.

C.1.1 Storm Sewer Map Preparation

Lake County will prepare an outfall map to allow for tracking of dry weather flow inspections and outfall maintenance. The Lake County Division of Transportation will implement and maintain a program to inventory and locate all storm water discharge points located on the County Highway System. This data will be stored in a GIS database for analysis and mapping use. Lake County is committed to working with other MS4's in Lake County to maintain data collection standards that will foster data sharing and county-wide mapping.

Measurable Goals: Percentage of storm sewer outlets mapped. Quality and compatibility of data with other MS4's in Lake County. Verify outfalls in the field and give each outfall a unique identifier to be used to document inspections. Update map regularly as improvements or new developments occur.

Status: 100% of storm sewers and outlets on the County Highway system mapped and made available to staff using an intranet-based GIS interface. Outfall inventory data field verified during Year 5. Annual updates of inventory planned.

C.2.1 Regulatory Control Program

Lake County will review, consider, adopt and maintain ordinance language to prohibit non-storm water discharges to the storm sewer or drainage system and to provide an enforcement mechanism for the illicit discharge detection and elimination program. The Lake County Division of Transportation will impose applicable statutory authority as an additional enforcement mechanism when necessary to eliminate identified illicit discharges from the system.

Measurable Goals: Unified Development Ordinance language change. Watershed Development Ordinance changes adopted. Continue development of IDDE program. Promote methods, activities, enforcement and schedule to identify and remove illicit discharges.

Status: Watershed Development Ordinance and Unified Development Ordinance language changes adopted during Year 4 with IDDE program in place in the Unified Development Ordinance during Year 5. Continued work on development of IDDE program including initial field screening and review of storm sewer outfalls during dry weather conditions.

C.3.1 Detection/Elimination Prioritization Plan

USEPA requires MS4s to develop a plan to detect and address illicit discharges. The plan developed by the MS4 will be dependent on several factors, including available resources, size of staff, degree and character of its illicit discharges. SMC has assembled various sources of information, including case studies on illicit discharge detection and elimination programs throughout the U.S.

Measurable Goals: Review information provided by SMC on how to develop NPDES program. Review case studies of NPDES programs. Participate in the SMC sponsored Municipal Advisory Committee (MAC) meetings throughout Year 5. Illicit discharge detection planning and program development continues as a topic of discussion. Finalize and implement Illicit Discharge Detection and Elimination Plan.

Status: Lake County actively participated in the SMC sponsored Municipal Advisory Committee (MAC) meetings during Year 5. Illicit discharge detection planning and program development continues as a topic of

discussion. Initial IDDE screening carried out in Year 5. Finalize and implement Illicit Discharge Detection and Elimination Plan in Year 6.

C.4.1 Illicit Discharge Tracing Procedures

Measurable Goals: Pilot activities used to identify illicit connections such as dry weather screening and targeted video inspection in support of IDDE program development. Conduct dry weather screening inspections in Year 5.

Status: Initial dry weather screening inspections and reviews conducted during Year 5. Targeted video inspection services have been made available by the Lake County Public Works Department in support of the IDDE program in the event that illicit discharges are suspected.

C.5.1 Illicit Source Removal Procedures

Solid Waste Agency of Lake County (SWALCO) holds household waste collection events in various communities throughout Lake County. These events are used to collect waste before it enters the MS4's storm system through illicit dumping and also to publicize the MS4's illicit discharge detection and elimination plan.

Measurable Goal(s), including frequencies: Quantity and variety of waste materials collected. Public response to collection efforts.

Status: Household Chemical Waste Collection and Electronics Collection events were sponsored and held by the Solid Waste Agency of Lake County (SWALCO) in Year 5.

C.5.2 Illicit Source Removal Procedures

The MS4 will implement a program and train employees to remove potential and known sources of illicit discharges.

Measurable Goals: Begin to develop municipal employee IDDE training program. Consider targeting employees in relevant positions that will perform activities such as illicit discharge tracing procedures, visual dry weather storm water outfall screening and illicit source removal. Continue to advertise illicit discharge/illegal dumping hotline in local newsletter. Track hotline calls. Investigate suspicious reports in the field. (Depending upon level/type of implementation, related measurable goals could also be applied to C.7.). Create and distribute materials educating public about elements of IDDE program, such as illicit discharge/illegal dumping hotline, IDDE ordinance and SWALCO waste collection events. (Depending upon level/type of implementation, related measurable goals could also be applied to A.1 and/or A.4.) Contact SWALCO for relevant waste collection events in your community. Coordinate with SWALCO to market waste collection events to the public and to distribute IDDE-related information during the event. Conduct event and document participation.

Status: Progress made on this item with SWALCO efforts as described above and the conduct of initial visual dry weather screening and review of all storm water outfalls on the County Highway system. Initial employee IDDE training program development begun with development of spill control & response plan for Lake County facilities. First responder training in place for select Division of Transportation and Public Works Department employees.

C.6.1 Program Evaluation and Assessment

Lake County will periodically evaluate and assess their IDDE program.

Measurable Goals: Collaborate and share information about IDDE program and results through MAC. Share ideas about common illicit discharges, enforcement methods, prevention methods and public education/outreach techniques.

Status: Development of IDDE program continues with ongoing participation in MAC activities and meetings. Lake County to conduct an internal 5 year review of the NPDES II program effort during Year 6.

C.7.1 Visual Dry Weather Screening
The MS4 will conduct dry weather screening to locate illicit discharges.

Measurable Goals: Perform visual dry weather storm sewer outfall screening during Year 5. Investigate citizen illicit discharge/illegal dumping hotline reports when noted in the field. Utilize targeted video pipe inspections when needed to trace illicit discharges.

Status: Initial visual dry weather storm sewer outfall screening conducted during Year 5. No citizen reports of illicit discharges received during Year 5. Targeted video pipe inspection services available from Lake County Public Works if needed.

C.9.1 Public Notification
The Lake County Division of Transportation will put in place during Year 5 informational storm water inlet markings at a select number of existing inlet locations on the County highway system as available labor and equipment resources permit. New construction will utilize grate castings that incorporate an environmental notice onto the surface of the curb box.

Measurable Goals: Number and variety of installations. Quality and legibility of message provided on curb inlets.

Status: Specifications for new highway construction projects modified to require labeled castings to be used for all curb inlets and storm sewer inlet grates (special provision went into effect on 5/1/06). Embedded aluminum curb-top medallions installed in concrete curbing at all curb flag inlets on the Sunset Avenue highway construction project during Year 5.

4. Construction Site Runoff Control

Lake County has adopted a Watershed Development Ordinance (WDO) that establishes the minimum storm water management requirements for development in Lake County. The WDO, which is enforced by SMC as well as by certified communities in the county, establishes standards for construction site runoff control. The enforcement of the WDO implements BMPs under BMP numbers D.1, D.2, D.3, D.4, D.5, D.6, and D.7 as described below.

D.1.1 Regulatory Control Program
Institute an effective local regulatory program for controlling runoff from construction sites. The Unified Development ordinance has been adopted by Lake County as the regulatory mechanism to require erosion and sediment controls for construction activities in unincorporated Lake County. At a minimum, these standards apply to any development that hydrologicly disturbs 1,000 square feet or more.

Measurable Goal(s), including frequencies: Local ordinance in place. Staff dedicated to enforcement of regulatory provisions. Number of site development permits issued. Number of site inspections conducted.

Status: This program is in place. During the reporting period, from 3-15-07 to 3-15-08, the Lake County Department of Planning, Building and Development issued 560 Site Development Permits and conducted 2,337 field inspections.

D.1.2 Regulatory Control Program
Lake County will revise the Unified Development Ordinance to incorporate the changes in minimum requirements made necessary by the proposed revisions to the SMC Watershed Development Ordinance. This will require that lake County open a public comment period and conduct a public meeting or public hearing on the proposed revisions.

Measurable Goals: Necessary ordinance revisions have been completed and implemented in Year 3 - degree of compliance with requirements of updated ordinance requirements.

Status: This program was completed in Year 3 and is in place.

D.2.1 Erosion and Sediment Control BMPs
Erosion and sediment control plans required for all regulated development.

Measurable Goal(s), including frequencies: Quality of approved erosion and sediment control site plans and BMPs incorporated. Degree of compliance with approved site plans during construction. Land area disturbed and length of time disturbed.

Status: This program is in place. The Lake County Department of Planning, Building and Development requires storm water pollution prevention plans for all development requiring a site development permit. These plans are reviewed by staff prior to permit issuance and the start of construction activity. Construction sites are monitored by environmental inspectors employed by the Department.

D.2.2 Soil and Erosion Control Inspector's Program
During Year 4, the Unified Development Ordinance was amended to include a soil and erosion control inspector's program for projects exceeding 10 acres of hydrologic disturbance or exceeding 1 acre of hydrologic disturbance and has a Regulatory Floodplain, Isolated Waters of Lake county or Waters of the United States on-site or on adjoining property. The site development inspector acts as a private consultant hired by the applicant.

Measurable Goal(s), including frequencies: Number of projects requiring a site development inspector. Degree of compliance with approved site plans during construction. Land area disturbed and length of time disturbed.

Status: New program started 4/1/07 and in place.

D.3.1 Other Waste Control Program
The County of Lake is a member community in the Solid Waste Agency of Lake County (SWALCO) which sponsors regular household chemical waste collection events throughout the county. Providing convenient means to the public for drop-off and disposal helps to keep these waste materials out of landfills and receiving streams.

Measurable Goal(s), including frequencies: Quantity and variety of waste materials collected. Public response to collection efforts.

Status: Household Chemical Waste Collection and Electronics Collection events were sponsored and held by the Solid WasteAgency of Lake County (SWALCO) in Year 5.

D.3.2 Other Waste Control Program
Lake County has in place a nuisance ordinance which prohibits junk and debris and junk vehicles from collecting on properties. Helps to keep waste materials out of receiving streams.

Measurable Goal(s), including frequencies: Number of violation notices posted. Number of properties cleaned up. Quality of response to complaints received.

Status: This program is in place.

D.3.3 Construction Project Recycling
During Year 5, an intergovernmental agreement between Planning, Building and Development and SWALCO was maintained for Planning, Building and Development to inform the developers of subdivisions and commercial projects to recycle construction waste. Thresholds for the agreement are as follows:

- Any proposed subdivision containing 5 or more lots (with 5 or more new homes) and,
- Any non-residential development, including additions, consisting of new floor area in the amount of 10,000 square feet or more.

Measurable Goal(s), including frequencies: Number of applicants informed of the program during the building permit application process.

Status: This was a new program in Year 3. During Year 5 a total of 437 permit applicants were informed of the program.

D.4.1 Site Plan Review Procedures
Site plan review process

Measurable Goal(s), including frequencies: Conduct reviews of site plans for compliance with soil erosion and sediment control requirements and for incorporation of best management practices. Dedicate adequate and qualified staff to these review assignments.

Status: This program is in place. The Planning, Building and Development Department conducts detailed reviews of site plans for compliance with minimum soil erosion and sediment control measures and incorporation of best management practices as a step in the site development permit review process. Field inspections are conducted on a regular basis to ensure compliance. 560 Site Development Permits were issued and 2,337 site inspections were conducted by the Lake County Department of Planning, Building and Development during the twelve month period from 3-15-07 to 3-15-08.

D.5.1 Public Information Handling Procedures
Establish procedures for processing information received from the public about active or proposed construction activities. Dedicate adequate trained staff to receive and process public inquiries or complaints.

Measurable Goal(s), including frequencies: Number of public inquiries processed. Public satisfaction with staff response.

Status: This program is in place. During Year 5 of the program, Lake County processed 197 complaints.

D.6.1 Site Inspection/Enforcement Procedures
Conduct construction site inspections.

Measurable Goal(s), including frequencies: Number of site inspections completed. Deficiencies noted and compliance achieved. Inspect critical construction sites monthly or after rain events greater than 0.5 inches.

Status: This program is in place. During Year 5 of the program, 2,337 site inspections were conducted by the Lake County Planning, Building and Development Department.

D.6.2 Site Inspection/Enforcement Procedures
The Lake County Division of Transportation will hold pre-construction meetings with the contractor to review site requirements and the soil erosion and sediment control plan for all highway improvement projects. The SMC field inspector will be invited to participate in these meetings.

Measurable Goal(s), including frequencies: Contractor compliance with plan requirements.

Status: Preconstruction meetings were hosted for all projects in Year 5.

D.6.3 Site Inspection/Enforcement Procedures
The Lake County Department of Planning, Building and Development will hold pre-construction meetings with the contractor to review site requirements and the soil erosion and sediment control plan for all new subdivision developments. The site development field inspector will be invited and will participate in these meetings.

Measurable Goal(s), including frequencies: Contractor compliance with plan requirements.

Status: This program is in place. During Year 5 of the program, 40 pre-construction meetings were held.

D.7.1 Other Construction Site Run-off Controls
The Lake County Division of Transportation initiated a program to hire an engineering consultant to provide independent performance reviews and inspections of construction sites during the construction season. The

consultant reviewed site compliance with the SWPPP, prepared inspection reports and records associated with NPDES Phase II requirements and regularly evaluated the overall performance of the site BMP's while noting any deficiencies in the SWPPP for correction or modification. LCDOT staff to continued to provide post-storm event inspections and associated record keeping.

Measurable Goals: Number of site reviews conducted during Year 5, individual and collective jobsite compliance with NPDES Phase II performance measures, number of SWPPP deficiencies noted and corrected.

Status: There were a total of 510 construction site inspection reports filed during CFY2007 with 128 reports having deficiencies to be corrected identified. 100% of deficiencies identified were corrected. Program education conducted for resident engineers at start of Year 5. SWPPP requirements reviewed at each project pre-construction conference.

5. Post-Construction Runoff Control

As described above, the Lake County Watershed Development Ordinance (WDO) establishes the minimum storm water management requirements for development in Lake County. The WDO establishes standards for post-construction site runoff control. These standards apply to any new development or redevelopment resulting in over 0.5 acres of new impervious area. The enforcement of the WDO implements BMPs under BMP numbers E.2, E.3, E.4, E.5 and E.6 as described below.

E.2.1 Regulatory Control Program

The adopted Watershed Development Ordinance minimum standards require that all applicants adopt a storm water management strategy for controlling post-construction runoff. The applicant must develop a storm water management strategy that minimizes the increase in runoff volumes and rates and addresses the water quality treatment requirements of the ordinance. The proposed drainage plan must use the runoff reduction hierarchy in the ordinance and implement BMPs as required. The ordinance also requires the use of buffers when adjacent to existing water bodies.

Measurable Goal(s), including frequencies: Continue to enforce the existing ordinance. All disturbed areas must be stabilized before final approval of a project. Implementation of necessary BMP's.

Status: This program is in place. All disturbed areas must be stabilized before final approval of a project.

E.3.1 Long Term O&M Procedures

The adopted Watershed Development Ordinance minimum standards require that a maintenance plan be prepared for all storm water management system components for Major Developments (as defined in the ordinance). The maintenance plan must include: maintenance tasks, the party responsible, a description of all permanent public or private access maintenance easements and overland flow paths and compensatory storage areas and a description of dedicated sources of funding for the required maintenance.

Measurable Goal(s), including frequencies: Continue to enforce the existing ordinance.

Status: This program is in place.

E.4.1 Pre-Construction Review of BMP Designs

A plan review is conducted for all soil erosion and sediment control plans submitted. This includes a review of the proposed BMPs for post-construction runoff control.

Measurable Goal(s), including frequencies: Continue to enforce the existing ordinance.

Status: This program is in place. During Year 5 of the program, 1,773 plan reviews were conducted.

E.5.1 Site Inspections During Construction

The adopted Watershed Development Ordinance provides both the recommended and the minimum requirements for site inspections. Enforcement officers may inspect a site development at any stage in the construction process. For major developments, the enforcement officer shall conduct site inspections, at a minimum, upon completion of installation of sediment and runoff control measures and after final stabilization and landscaping, prior to removal of sediment controls.

Measurable Goal(s), including frequencies: Continue to enforce the existing ordinance.

Status: This program is in place. During Year 5 of the program, 2,337 site inspections were performed.

E.6.1 Post-Construction Inspections

The enforcement officer shall conduct post-construction inspections prior to the release of performance guarantees, maintenance guarantees or certificates of occupancy as provided for in the ordinance.

Measurable Goal(s), including frequencies: Continue to enforce the existing ordinance.

Status: This program is in place.

6. Pollution Prevention/Good Housekeeping

This minimum control measure involves the development and implementation of an operation and maintenance program to reduce the discharge of pollutants from municipal operations. This program must include a training program for municipal employees. MS4s will perform BMPs under BMP number F.1, F.2, F.3, F.4 and F.6 described below.

F.1.1 Employee Training Program

Lake County will develop a training program for employees. Any new training materials will be developed based on guidance that is widely available. Lake County will also evaluate and incorporate existing employee training programs into this program. The training program will be updated and expanded as Lake County continues to implement its stormwater management programs.

Measurable Goal(s), including frequencies: Develop employee training program specific to County operations and facilities. Conduct annual training for employees that will implement or utilize BMPs. Design and conduct employee spill control training in Year 5.

Status: Lake County Division of Transportation Resident Engineers and Design Engineers trained and certified as SMC certified Designated Erosion Control Inspectors (DECI) during Year 5. Lake County Facilities Spill Response & Control Plan development continued during Year 5.

F.2.1 Inspection and Maintenance Program

The MS4 will examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems.

Measurable Goals: Establish a schedule for street sweeping to reduce the amount of pollution (sand, salt, leaves, etc) that accumulates on streets, which has the potential to reach waterways as runoff. Implement street sweeping at established annual frequency and document. Establish a schedule for visual storm sewer inspection. Inspect storm sewers at established annual frequency and document. Schedule maintenance as needed. Develop and implement an operations and maintenance program for detention and water quality ponds to ensure that they are operating to maximize water quality benefits and detention storage. Include formal inspection schedule, inspection checklist and record-keeping procedures. (Depending upon level/type of implementation, related measurable goals could also be applied to F.4.) Continue to distribute educational materials on spill prevention and control procedures to targeted County employees. (Depending upon level/type of implementation, related measurable goals could also be applied to F.4.)

Status: Street sweeping program in place. The 175 lane miles of County Highway that were targeted for sweeping during CFY2007 were swept 5.0 times during that period. Storm water detention and water quality basins inspected and maintained on a semi-annual program by maintenance and contract personnel.

F.2.2 Inspection and Maintenance Program
Develop and implement a spill prevention and control plan for Lake County-owned facilities.

Measurable Goal(s), including frequencies: Plan development, implementation and future updates. Final adoption and implementation is anticipated in Year 5.

Status: Spill Response & Control Plan development continued during Year 5. Division of Transportation and Public Works Department facilities incorporated into a GIS based plan made available to employees using an intranet interface. Bulk materials and storage locations identified as well as all storm sewer, sanitary sewer and water supply facilities. Site topography provided for spill control activities. Spill control measures and materials still being developed. MSDS sheets for all stored materials available as hot links in the interface.

F.3.1 Municipal Operations Storm Water Control
Storm sewer system and catch basin inspection and cleaning program.

Measurable Goal(s), including frequencies: Annually inspect 5% of system, and clean as needed.

Status: Annual routine maintenance performed on County-owned storm sewer system during Year 5. This basic program is in place.

F.3.2 Detention Basin Maintenance Program
The Lake County Division of Transportation inventoried County-owned detention basins in 2003-2004. These inventories include basin features such as outlet structures, emergency overflow spillways and basin type. GPS coordinates were collected for incorporation of these inventories into GIS database.

Basins inspected by maintenance personnel and necessary maintenance work items completed semi-annually. Prescriptive burns completed on two basins that incorporate prairie landscapes.

Measurable Goals: Semi-annually inspect and perform necessary maintenance on all County-owned storm water detention basins.

Status: This program is in place.

F.4 Municipal Operations Waste Disposal
Municipal Operations Waste Disposal

Measurable Goal(s), including frequencies: Incorporate waste disposal procedures into the facilities programs described above in F.2.1 and F.2.2.

Status: Facility waste disposal activities are contracted to private services. The Lake County Division of Transportation continued to develop and implement a spill control plan in Year 5.

F.6 Other Municipal Operations Controls
Highway sweeping

Measurable Goal(s), including frequencies: Lane miles swept and frequency of sweeping during Year 5.

Status: County Highway system curb & gutter sections (175 curbed lane miles) swept a total of 5.0 times during CFY2007.

Part C. Information and Data Collection Results

Year 5 activities related to illicit discharge detection and elimination consisted primarily of program planning, system inventory and GIS application building efforts. An initial round of general dry weather screening was conducted during Year 5 for all storm sewer outlets with no illicit discharge cases detected.

Part D. Summary of Year 6 Stormwater Activities

The following table summarizes the BMPs committed to for Year 6. Specific BMPs and measurable goals for Year 6 Stormwater Management Program development activities are presented in the sections following the table.

Note: X indicates BMPs committed to for Year 6.

Year 6 MS4	
A. Public Education and Outreach	
X	A.1 Distributed Paper Material
X	A.2 Speaking Engagement
X	A.3 Public Service Announcement
X	A.4 Community Event
	A.5 Classroom Education Material
	A.6 Other Public Education
B. Public Participation/Involvement	
X	B.1 Public Panel
	B.2 Educational Volunteer
X	B.3 Stakeholder Meeting
X	B.4 Public Hearing
X	B.5 Volunteer Monitoring
	B.6 Program Coordination
	B.7 Other Public Involvement
C. Illicit Discharge Detection and Elimination	
X	C.1 Storm Sewer Map Preparation
X	C.2 Regulatory Control Program
X	C.3 Detection/Elimination Prioritization Plan
X	C.4 Illicit Discharge Tracing Procedures
X	C.5 Illicit Source Removal Procedures
X	C.6 Program Evaluation and Assessment
X	C.7 Visual Dry Weather Screening
	C.8 Pollutant Field Testing
X	C.9 Public Notification
	C.10 Other Illicit Discharge Controls

Year 6 MS4	
D. Construction Site Runoff Control	
X	D.1 Regulatory Control Program
X	D.2 Erosion and Sediment Control BMPs
X	D.3 Other Waste Control Program
X	D.4 Site Plan Review Procedures
X	D.5 Public Information Handling Procedures
X	D.6 Site Inspection/Enforcement Procedures
X	D.7 Other Construction Site Runoff Controls
E. Post-Construction Runoff Control	
	E.1 Community Control Strategy
X	E.2 Regulatory Control Program
X	E.3 Long Term O&M Procedures
X	E.4 Pre-Const Review of BMP Designs
X	E.5 Site Inspections During Construction
X	E.6 Post-Construction Inspections
	E.7 Other Post-Const Runoff Controls
F. Pollution Prevention/Good Housekeeping	
X	F.1 Employee Training Program
X	F.2 Inspection and Maintenance Program
X	F.3 Municipal Operations Storm Water Control
X	F.4 Municipal Operations Waste Disposal
	F.5 Flood Management/Assess Guidelines
X	F.6 Other Municipal Operations Controls

The QLP has committed to providing a Stormwater Management Program Plan (SMPP) template. The use of this type of document will likely enhance the efficiency of the MS4 program and ease in reporting, training and tracking. It is anticipated that the enhanced SMPP template will be received from SMC by mid Year 6. The MS4 will review, revise and accept the SMPP by the end of Year 6.

1. Public Education and Outreach

Lake County (MS4) is committing to implementing the Public Education and Outreach component of its Stormwater Management Program. The Public Education and Outreach program includes the distribution of educational material to the community or conducting equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants to stormwater runoff. Lake County commits to implementation of BMPs as described below.

A.1.1 Distributed Paper Material

Lake County will distribute publications received from SMC to local target groups.

Measurable Goals: Make available and distribute two manuals "A Citizen's Guide to Maintaining Stormwater Best Management Practices" and "Living with Wetlands: A Handbook for Homeowners in Northeastern Illinois" to local entities such as homeowners associations and stakeholder groups.

A.1.2 Distributed Paper Material

The Lake County Department of Planning, Building and Development will distribute educational materials on a variety of storm water quality topics to targeted groups.

Measurable Goal(s), including frequencies: The Lake County Planning, Building and Development Department will make available and distribute the following publications to permit applicants, developers, homeowner groups and any other interested groups or individuals.

"Silt Fences & Straw Bale Barriers" – Erosion control best practices.
"Site Development Permits" – Natural resource issues related to site development.
"Wetlands" – General regulatory information as it relates to site development.
"Floodplains" – General regulatory information as it relates to site development.
"Soil Erosion & Sediment Control" – General regulatory information as it relates to site development.
"Septic Systems" – Site development requirements.
"Swales" – Site development requirements.

A.1.3 Distributed Paper Material

The Lake County Health Department will distribute educational materials on a variety of stormwater quality topics to targeted groups.

Measurable Goal(s), including frequencies: The Lake County Health Department will make available and distribute the following publications related to natural resources and water quality management.

"Cattail Chronicles" – A quarterly newsletter published by the Lakes Management Unit of the Environmental Health Division of the Lake County Health Department dedicated to public education on water quality issues specific to Lake County.
"Wastewater News" – A biannual newsletter.
"Waterlines" – A water well newsletter targeting licensed well contractors.
"National Groundwater Awareness Week" – Since 1999 the Lake County Health Department has issues a press release and reduced water analysis fees for private well samples during this annual observance. In 2006, Lake County expanded the reduced-fee tests available and produced a pamphlet explaining common water testing parameters.
"National Recreational Water Illness Prevention Week" – New in 2006, the lake County Health Department is highlighting the value of healthy swimming and recreational water illness prevention.
"Private Water Well Testing" – Publication.
"Types of Wells in Lake County" – Publication.
"Frequently Asked Questions about Water Wells" – Publication.
"Well Chlorination Procedures" – Publication.

"Investigate Before You Invest in a Vacant Lot" – Publication.
"Investigate Before You Invest in a Home" – Publication.
"Wastewater Treatment and Dispersal by Onsite Wastewater Treatment Systems" – Publication.
Numerous water related press releases *(i.e. Reduce Outdoor Water Use During Drought)*
"Lake Reports" – An annual report issued by the Lakes Management Unit of the Environmental Health Division of the Lake County Health Department. Report contains detailed information on the environmental health of 22 different lakes in Lake County.
"Buffer Strips – Why they should be part of your shoreline" – Best management practices for planting and maintaining shoreline property.
"Phosphorous in Lake County" – Educational brochure on limiting the use of phosphorous.

A.2 Speaking Engagement

Lake County will make employees available for speaking engagements to groups of interested residents on storm water related topics. This program will be administered by the Lake County Administrator's Office.

Measurable Goal(s), including frequencies: The Lake County Communications Department will arrange to provide public speakers on storm water related topics through it's "Speakers Bureau". These services are provided upon request from interested public groups. Speakers are Lake County employees and are selected based upon there expertise on a requested topic.

A.3 Public Service Announcement

Lake County will plan to air one or more public service announcements on the local cable access channel run by Lake County (LCTV). Citizen participation in preserving storm water quality will be the focus.

Measurable Goals: Number and quality of PSA's aired. Public response and feedback to PSA's.

A.4.1 Community Event

A soil erosion and sediment control workshop will be sponsored by the QLP and conducted on a bi-annual basis. This workshop is geared toward developers, engineers, municipalities and enforcement officers. Lake County will participate in the bi-annual workshop.

Participate in local initiatives directed at improving water quality.

Measurable Goal(s): Participate in the bi-annual soil erosion and sediment control workshop. Participation in locally sponsored efforts to improve water quality.

A.4.2 Community Event

The MS4 provides a convenient location where the general public can dispose of common household pollutants. Solid Waste Agency of Lake County (SWALCO) holds household waste collection events in various communities throughout Lake County, which assist in collecting waste before it enters the storm sewer system. The MS4 publicizes these SWALCO events.

Measurable Goal(s): Implement current MS4 SMPP.
Review and revise enhanced SMPP template, provided by QLP, language related to this provision by end of Year 6.

2. Public Participation/Involvement

Lake County is committing to implementing the Public Participation/Involvement component of its Stormwater Management Program. The Public Participation/Involvement program includes attending and publicizing watershed stakeholder meetings, presenting program information at a public meeting at least annually and publicizing IDDE reporting contact numbers. The MS4 commits to implementation of BMPs as described below.

B.1 Public Panel

Measurable Goals: Involvement on public panels. Number of meetings attended / degree of participation.

Representatives from the lake County Department of Planning, Building and Development and the Lake County Division of Transportation will continue to serve on the SMC Technical Advisory Committee (12 meetings) and the SMC Municipal Advisory Committee (12 meetings) during Year 5.

B.3 Stakeholder Meeting

Stakeholder meetings are conducted throughout the county for ongoing planning and project implementation efforts. When stakeholder groups (such as watershed planning committees) include the jurisdictional area of the MS4, the MS4 will publicize stakeholder meetings locally and participate by being represented at the stakeholder meetings.

Measurable Goals: Publicize and participate in relevant watershed planning committees and other stakeholder groups such as:

- Chicago Wilderness Aquatic Task Force
- Barrington Area Council of Governments (BACOG) – Water Quality Committee
- NIPC Water Supply Task Force and Water Quality Task Force for the 2002 NIPC Strategic Plan for Water Resource Management
- Lake County Framework Plan and Unified Development Ordinance Committees regarding water supplies and water quality
- Fremont Township Well Committee
- Indian Creek Watershed Committee
- Fish Lake Drain Watershed Committee
- Upper Des Plaines River Watershed Committee
- Flint Creek Watershed Committee
- Squaw Creek Watershed Committee
- Sequoit Creek Watershed Committee
- North Chicago Watershed Committee
- Waukegan River Watershed Committee
- ISD (Onsite Wastewater) Steering Committee
- Management entities for individual lakes in Lake County (Homeowners Associations, Villages and/or Townships).

B.4 Public Hearing

Lake County will meet its own requirements for conducting a variety of public meetings or hearings on issues that are related to preserving storm water quality.

Measurable Goal(s), including frequencies: The following types of public meetings or hearings will be held in Year 5 and will often include agenda items that are related to storm water quality:

Lake County Board – The Lake County Board meets each month to conduct the business of Lake County. These meetings are open to the public and are broadcast on local cable television access. The County Board also has a number of working committees that members serve on which meet regularly and are also open to the public.

Zoning Board of Appeals – The Zoning Board of Appeals holds public hearings to consider applications for rezoning, conditional use permits and requests for variation and administrative appeals. All meetings of the Zoning Board of Appeals are open to the public.

Regional Planning Commission – The Regional Planning Commission is an advisory group to the Lake County Board on issues related to land development. The Commission meets twice monthly. All meetings of the Commission are open to the public.

Lake County Stormwater Management Commission – Lake County Board members comprise six of twelve representatives on this commission. The Commission has the responsibility for implementing the Comprehensive Storm water Management Plan for Lake County which was previously adopted jointly by the Lake County Board and the Commission in 1990. The Commission meets monthly and all meetings are open to the public. The Lake County Storm water Management Commission serves as the Qualifying Local Program (QLP) for this submittal.

Technical Advisory Committee / Lake County Stormwater Management Commission – This is a working committee of representative staff from local government and private development interests in Lake County.

Lake County has representatives from it's Department of Planning, Building and Development and Division of Transportation that serve on this committee. The Technical Advisory Committee meets once each month and all meetings are open to the public.

Municipal Advisory Committee / Lake County Stormwater Management Commission – This is a working committee of representative staff from local government interests in Lake County. Lake County has representatives from it's Department of Planning, Building and Development, Health Department and Division of Transportation that serve on this committee. The Municipal Advisory Committee meets once each month and all meetings are open to the public.

B.5 Volunteer Monitoring

"Lake County Adopt-A-Highway Program"

Measurable Goal(s), including frequencies: Volunteer groups "adopt" a section of County Highway and agree to remove litter twice each year. Program is managed by the Lake County Division of Transportation.

3. Illicit Discharge Detection and Elimination

The MS4 will implement program activities related to the Illicit Discharge Detection and Elimination (IDDE) minimum control. The requirements of an IDDE program include the following:

- Develop a storm sewer system map that shows the locations of all outfalls and the names and locations of all water of the US that receive discharges from those outfalls.
- Prohibit non-storm water discharges into the storm sewer system and implement appropriate enforcement procedures and actions.
- Develop and implement a plan to detect and address illicit discharges into the storm sewer system.
- Educate public employees, businesses and general public of hazards associated with illegal discharges and improper disposal of waste.
- Identify the appropriate best management practices and measurable goals.

BMPs will be implemented under BMP numbers C.1, C.2, C.3, C.4, C.5, C.6, C.7, and C.9 as described below.

C.1 Storm Sewer Map Preparation

Lake County will prepare an outfall map to allow for tracking of dry weather flow inspections and outfall maintenance. The Lake County Division of Transportation will implement and maintain a program to inventory and locate all storm water discharge points located on the County Highway System. This data will be stored in a GIS database for analysis and mapping use. Lake County is committed to working with other MS4's in Lake County to maintain data collection standards that will foster data sharing and county-wide mapping.

Measurable Goals: Percentage of storm sewer outlets mapped. Quality and compatibility of data with other MS4's in Lake County. Verify outfalls in the field and give each outfall a unique identifier to be used to document inspections. Update map regularly as improvements or new developments occur.

C.2 Regulatory Control Program

Lake County will review, consider, adopt and maintain ordinance language to prohibit non-storm water discharges to the storm sewer or drainage system and to provide an enforcement mechanism for the illicit discharge detection and elimination program. The Lake County Division of Transportation will impose applicable statutory authority as an additional enforcement mechanism when necessary to eliminate identified illicit discharges from the system.

Measurable Goals: Unified Development Ordinance language change. Watershed Development Ordinance changes adopted. Continue development of IDDE program. Promote methods, activities, enforcement and schedule to identify and remove illicit discharges.

C.3.1 Detection/Elimination Prioritization Plan

USEPA requires MS4s to develop a plan to detect and address illicit discharges. The plan developed by the MS4 will be dependent on several factors, including available resources, size of staff, degree and character of its

illicit discharges. SMC has assembled various sources of information, including case studies on illicit discharge detection and elimination programs throughout the U.S.

Measurable Goals: Review information provided by SMC on how to develop NPDES program. Review case studies of NPDES programs. Participate in the SMC sponsored Municipal Advisory Committee (MAC) meetings throughout Year 5. Illicit discharge detection planning and program development continues as a topic of discussion. Finalize and implement Illicit Discharge Detection and Elimination Plan.

C.3.2 Detection/Elimination Prioritization Plan

Implement plan established during original NOI to detect and address illicit discharges. Detection methods include dry-weather screening, regular storm sewer maintenance, and public reporting. Plan will be implemented in accordance with performance milestones established in current SMPP. All outfalls observed to have dry weather flow during pre-screening (pre-screening activities completed during original NOI), to be investigated by the end of Year 8. Complete dry weather screening of all outfalls on a rotating basis with each outfall being inspected at least once every 5-years. Enhance current plan based on SMPP template and implement plan enhancements.

Measurable Goal(s): Implement current MS4 SMPP. Review, revise and accept SMPP template language related to this provision by end of Year 6.

C.4 Illicit Discharge Tracing Procedures

Implement procedures established during original NOI to trace found/observed illicit discharges to their origin. Efforts to locate illicit discharges will be documented. Enhance current plan based on SMPP template and implement plan enhancements.

Measurable Goal(s): Implement current MS4 SMPP. Review, revise and accept SMPP template language related to this provision by end of Year 6.

C.5.1 Illicit Source Removal Procedures

Solid Waste Agency of Lake County (SWALCO) holds household waste collection events in various communities throughout Lake County. These events are used to collect waste before it enters the MS4's storm system through illicit dumping and also to publicize the MS4's illicit discharge detection and elimination plan.

Measurable Goal(s), including frequencies: Quantity and variety of waste materials collected. Public response to collection efforts.

C.5.2 Illicit Source Removal Procedures

The MS4 will implement a program and train employees to remove potential and known sources of illicit discharges.

Measurable Goals: Begin to develop municipal employee IDDE training program. Consider targeting employees in relevant positions that will perform activities such as illicit discharge tracing procedures, visual dry weather storm water outfall screening and illicit source removal. Continue to advertise illicit discharge/illegal dumping hotline in local newsletter. Track hotline calls. Investigate suspicious reports in the field. (Depending upon level/type of implementation, related measurable goals could also be applied to C.7.). Create and distribute materials educating public about elements of IDDE program, such as illicit discharge/illegal dumping hotline, IDDE ordinance and SWALCO waste collection events. (Depending upon level/type of implementation, related measurable goals could also be applied to A.1 and/or A.4.) Contact SWALCO for relevant waste collection events in your community. Coordinate with SWALCO to market waste collection events to the public and to distribute IDDE-related information during the event. Conduct event and document participation.

C.6 Program Evaluation and Assessment

Lake County will periodically evaluate and assess their IDDE program.

Measurable Goals: Collaborate and share information about IDDE program and results through MAC. Share ideas about common illicit discharges, enforcement methods, prevention methods and public education/outreach techniques. Conduct an internal review of compliance efforts with the original NOI during Year 6.

C.7 Visual Dry Weather Screening

The MS4 will conduct dry weather screening to locate illicit discharges.

Measurable Goals: Perform visual dry weather storm sewer outfall screening during Year 6. Investigate citizen illicit discharge/illegal dumping hotline reports when noted in the field. Utilize targeted video pipe inspections when needed to trace illicit discharges.

C.9 Public Notification

The Lake County Division of Transportation will put in place during Year 6 informational storm water inlet markings at a select number of existing inlet locations on the County highway system as available labor and equipment resources permit. New construction will utilize grate castings that incorporate an environmental notice onto the surface of the curb box.

Measurable Goals: Number and variety of installations. Quality and legibility of message provided on curb inlets.

4. Construction Site Runoff Control

Lake County has adopted a Watershed Development Ordinance (WDO) that establishes the minimum stormwater management requirements for development in Lake County. The WDO, which is enforced by SMC as well as by certified communities in the county, establishes standards for construction site runoff control. The enforcement of the WDO implements BMPs as described below.

D.1.1 Regulatory Control Program

Institute an effective local regulatory program for controlling runoff from construction sites. The Unified Development ordinance has been adopted by Lake County as the regulatory mechanism to require erosion and sediment controls for construction activities in unincorporated Lake County. At a minimum, these standards apply to any development that hydrologicly disturbs 1,000 square feet or more.

Measurable Goal(s), including frequencies: Local ordinance in place. Staff dedicated to enforcement of regulatory provisions. Number of site development permits issued. Number of site inspections conducted.

D.1.2 Regulatory Control Program

Lake County will revise the Unified Development Ordinance to incorporate the changes in minimum requirements made necessary by the proposed revisions to the SMC Watershed Development Ordinance. This will require that lake County open a public comment period and conduct a public meeting or public hearing on the proposed revisions.

Measurable Goals: Necessary ordinance revisions have been completed and implemented in Year 3 - degree of compliance with requirements of updated ordinance requirements.

D.2.1 Erosion and Sediment Control BMPs

Erosion and sediment control plans required for all regulated development.

Measurable Goal(s), including frequencies: Quality of approved erosion and sediment control site plans and BMPs incorporated. Degree of compliance with approved site plans during construction. Land area disturbed and length of time disturbed.

D.2.2 Soil and Erosion Control Inspector's Program

During Year 4, the Unified Development Ordinance was amended to include a soil and erosion control inspector's program for projects exceeding 10 acres of hydrologic disturbance or exceeding 1 acre of hydrologic disturbance and has a Regulatory Floodplain, Isolated Waters of Lake county or Waters of the United States on-site or on adjoining property. The site development inspector acts as a private consultant hired by the applicant.

Measurable Goal(s), including frequencies: Number of projects requiring a site development inspector. Degree of compliance with approved site plans during construction. Land area disturbed and length of time disturbed.

D.3.1 Other Waste Control Program

The County of Lake is a member community in the Solid Waste Agency of Lake County (SWALCO) which sponsors regular household chemical waste collection events throughout the county. Providing convenient means to the public for drop-off and disposal helps to keep these waste materials out of landfills and receiving streams.

Measurable Goal(s), including frequencies: Quantity and variety of waste materials collected. Public response to collection efforts.

D.3.2 Other Waste Control Program

Lake County has in place a nuisance ordinance which prohibits junk and debris and junk vehicles from collecting on properties. Helps to keep waste materials out of receiving streams.

Measurable Goal(s), including frequencies: Number of violation notices posted. Number of properties cleaned up. Quality of response to complaints received.

D.3.3 Construction Project Recycling

During Year 5, an intergovernmental agreement between Planning, Building and Development and SWALCO was maintained for Planning, Building and Development to inform the developers of subdivisions and commercial projects to recycle construction waste. Thresholds for the agreement are as follows:

- Any proposed subdivision containing 5 or more lots (with 5 or more new homes) and,
- Any non-residential development, including additions, consisting of new floor area in the amount of 10,000 square feet or more.

Measurable Goal(s), including frequencies: Number of applicants informed of the program during the building permit application process.

D.4 Site Plan Review Procedures

Site plan review process

Measurable Goal(s), including frequencies: Conduct reviews of site plans for compliance with soil erosion and sediment control requirements and for incorporation of best management practices. Dedicate adequate and qualified staff to these review assignments.

D.5 Public Information Handling Procedures

Establish procedures for processing information received from the public about active or proposed construction activities. Dedicate adequate trained staff to receive and process public inquiries or complaints.

Measurable Goal(s), including frequencies: Number of public inquiries processed. Public satisfaction with staff response.

D.6.1 Site Inspection/Enforcement Procedures

Conduct construction site inspections.

Measurable Goal(s), including frequencies: Number of site inspections completed. Deficiencies noted and compliance achieved. Inspect critical construction sites monthly or after rain events greater than 0.5 inches.

D.6.2 Site Inspection/Enforcement Procedures
The Lake County Division of Transportation will hold pre-construction meetings with the contractor to review site requirements and the soil erosion and sediment control plan for all highway improvement projects. The SMC field inspector will be invited to participate in these meetings.

Measurable Goal(s), including frequencies: Contractor compliance with plan requirements.

D.6.3 Site Inspection/Enforcement Procedures
The Lake County Department of Planning, Building and Development will hold pre-construction meetings with the contractor to review site requirements and the soil erosion and sediment control plan for all new subdivision developments. The site development field inspector will be invited and will participate in these meetings.

Measurable Goal(s), including frequencies: Contractor compliance with plan requirements.

D.7 Other Construction Site Run-off Controls
The Lake County Division of Transportation initiated a program to hire an engineering consultant to provide independent performance reviews and inspections of construction sites during the construction season. The consultant reviewed site compliance with the SWPPP, prepared inspection reports and records associated with NPDES Phase II requirements and regularly evaluated the overall performance of the site BMP's while noting any deficiencies in the SWPPP for correction or modification. LCDOT staff to continue to provide post-storm event inspections and associated record keeping.

Measurable Goals: Number of site reviews conducted during Year 6, individual and collective jobsite compliance with NPDES Phase II performance measures, number of SWPPP deficiencies noted and corrected.

5. Post-Construction Runoff Control
As described above, the Lake County Watershed Development Ordinance (WDO) establishes the minimum stormwater management requirements for development in Lake County. The WDO establishes standards for post-construction site runoff control. These standards apply to any new development or redevelopment resulting in over 0.5 acres of new impervious area. The enforcement of the WDO implements BMPs as described below.

E.2 Regulatory Control Program
The adopted Watershed Development Ordinance minimum standards require that all applicants adopt a storm water management strategy for controlling post-construction runoff. The applicant must develop a storm water management strategy that minimizes the increase in runoff volumes and rates and addresses the water quality treatment requirements of the ordinance. The proposed drainage plan must use the runoff reduction hierarchy in the ordinance and implement BMPs as required. The ordinance also requires the use of buffers when adjacent to existing water bodies.

Measurable Goal(s), including frequencies: Continue to enforce the existing ordinance. All disturbed areas must be stabilized before final approval of a project. Implementation of necessary BMP's.

E.3 Long Term O&M Procedures
The adopted Watershed Development Ordinance minimum standards require that a maintenance plan be prepared for all storm water management system components for Major Developments (as defined in the ordinance). The maintenance plan must include: maintenance tasks, the party responsible, a description of all permanent public or private access maintenance easements and overland flow paths and compensatory storage areas and a description of dedicated sources of funding for the required maintenance.

Measurable Goal(s), including frequencies: Continue to enforce the existing ordinance.

E.4 Pre-Construction Review of BMP Designs

A plan review is conducted for all soil erosion and sediment control plans submitted. This includes a review of the proposed BMPs for post-construction runoff control.

Measurable Goal(s), including frequencies: Continue to enforce the existing ordinance.

E.5 Site Inspections During Construction

The adopted Watershed Development Ordinance provides both the recommended and the minimum requirements for site inspections. Enforcement officers may inspect a site development at any stage in the construction process. For major developments, the enforcement officer shall conduct site inspections, at a minimum, upon completion of installation of sediment and runoff control measures and after final stabilization and landscaping, prior to removal of sediment controls.

Measurable Goal(s), including frequencies: Continue to enforce the existing ordinance.

E.6 Post-Construction Inspections

The enforcement officer shall conduct post-construction inspections prior to the release of performance guarantees, maintenance guarantees or certificates of occupancy as provided for in the ordinance.

Measurable Goal(s), including frequencies: Continue to enforce the existing ordinance.

6. Pollution Prevention/Good Housekeeping

This portion of the program involves the implementation of the operation and maintenance program to reduce the discharge of pollutants from municipal operations and a training program for municipal employees. Lake County commits to implementation of BMPs as described below.

F.1 Employee Training Program

Lake County will develop a training program for employees. Any new training materials will be developed based on guidance that is widely available. Lake County will also evaluate and incorporate existing employee training programs into this program. The training program will be updated and expanded as Lake County continues to implement its storm water management programs.

Measurable Goal(s), including frequencies: Develop employee training program specific to County operations and facilities. Conduct annual training for employees that will implement or utilize BMPs. Design and conduct employee spill control training in Year 6.

F.2.1 Inspection and Maintenance Program

The MS4 will examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems.

Measurable Goals: Establish a schedule for street sweeping to reduce the amount of pollution (sand, salt, leaves, etc) that accumulates on streets, which has the potential to reach waterways as runoff. Implement street sweeping at established annual frequency and document. Establish a schedule for visual storm sewer inspection. Inspect storm sewers at established annual frequency and document. Schedule maintenance as needed. Develop and implement an operations and maintenance program for detention and water quality ponds to ensure that they are operating to maximize water quality benefits and detention storage. Include formal inspection schedule, inspection checklist and record-keeping procedures. (Depending upon level/type of implementation, related measurable goals could also be applied to F.4.) Continue to distribute educational materials on spill prevention and control procedures to targeted County employees. (Depending upon level/type of implementation, related measurable goals could also be applied to F.4.)

F.2.2 Inspection and Maintenance Program

Develop and implement a spill prevention and control plan for Lake County-owned facilities.

Measurable Goal(s), including frequencies: Plan development, implementation and future updates. Final adoption and implementation is anticipated in Year 6.

F.3.1 Municipal Operations Storm Water Control
Storm sewer system and catch basin inspection and cleaning program.

Measurable Goal(s), including frequencies: Annually inspect 5% of system, and clean as needed.

F.3.2 Detention Basin Maintenance Program
The Lake County Division of Transportation inventoried County-owned detention basins in 2003-2004. These inventories include basin features such as outlet structures, emergency overflow spillways and basin type. GPS coordinates were collected for incorporation of these inventories into GIS database.

Basins inspected by maintenance personnel and necessary maintenance work items completed semi-annually. Prescriptive burns completed on two basins that incorporate prairie landscapes.

Measurable Goals: Semi-annually inspect and perform necessary maintenance on all County-owned storm water detention basins. Update GIS Detention Basin inventory in Year 6.

F.4 Municipal Operations Waste Disposal
Municipal Operations Waste Disposal

Measurable Goal(s), including frequencies: Incorporate waste disposal procedures into the facilities programs described above in F.2.1 and F.2.2.

F.6 Other Municipal Operations Controls
Highway sweeping

Measurable Goal(s), including frequencies: Lane miles swept and frequency of sweeping during Year 6.

Part E. Notice of Qualifying Local Program

The Lake County Stormwater Management Commission (SMC) will serve as a Qualifying Local Program (QLP) for MS4s in Lake County. As outlined in the General Permit, SMC will perform functions related to each of the six minimum control measures. **As part of the second NOI, SMC is committed to create a SMPP template that can be reviewed and revised by each MS4, to enhance their existing program.** Part E of the Annual Report, which outlines the activities performed by SMC as the Qualifying Local Program, consists of the following 5 subparts:

- **Part E1** summarizes and describes any changes to Best Management Practices (BMPs) originally outlined for Year 5 in the General Permit.
- **Part E2** describes the status of BMPs and measurable goals performed in Year 5.
- **Part E3** provides the results of information or data collected during Year 5.
- **Part E4** describes BMPs and measurable goals for the program for Year 6.
- **Part E5** lists the construction projects funded by the QLP during Year 5 of the permit.

Part E1. Changes to Best Management Practices

Note: **X indicates BMPs performed that were proposed in your NPDES permit**
✓ indicates changes to BMPs proposed in your NPDES permit

Year 1	Year 2	Year 3	Year 4	Year 5	QLP
A. Public Education and Outreach					
X	X	X	X	X	A.1 Distributed Paper Material
					A.2 Speaking Engagement
X	X	X	X	X	A.3 Public Service Announcement
X	X	X	X	X	A.4 Community Event
	X	X			A.5 Classroom Education Material
X	X	X	X	X	A.6 Other Public Education
B. Public Participation/Involvement					
X	X	X	X	X	B.1 Public Panel
					B.2 Educational Volunteer
X	X	X	X	X	B.3 Stakeholder Meeting
					B.4 Public Hearing
					B.5 Volunteer Monitoring
X	X	X	X	X	B.6 Program Coordination
					B.7 Other Public Involvement
C. Illicit Discharge Detection and Elimination					
		X			C.1 Storm Sewer Map Preparation
X	X	X			C.2 Regulatory Control Program
					C.3 Detection/Elimination Prioritization Plan
					C.4 Illicit Discharge Tracing Procedures
					C.5 Illicit Source Removal Procedures
					C.6 Program Evaluation and Assessment
					C.7 Visual Dry Weather Screening
					C.8 Pollutant Field Testing
					C.9 Public Notification
X	X	X	X	X	C.10 Other Illicit Discharge Controls

Year 1	Year 2	Year 3	Year 4	Year 5	
D. Construction Site Runoff Control					
X	X	X	X	X	D.1 Regulatory Control Program
X	X	X	X	X	D.2 Erosion and Sediment Control BMPs
X	X	X	X	X	D.3 Other Waste Control Program
X	X	X	X	X	D.4 Site Plan Review Procedures
X	X	X	X	X	D.5 Public Information Handling Procedures
X	X	X	X	X	D.6 Site Inspection/Enforcement Procedures
	X	X			D.7 Other Construction Site Runoff Controls
E. Post-Construction Runoff Control					
	X				E.1 Community Control Strategy
X	X	X	X	X	E.2 Regulatory Control Program
X	X	X	X	X	E.3 Long Term O&M Procedures
X	X	X	X	X	E.4 Pre-Const Review of BMP Designs
X	X	X	X	X	E.5 Site Inspections During Construction
X	X	X	X	X	E.6 Post-Construction Inspections
X	X	X	X	X	E.7 Other Post-Const Runoff Controls
F. Pollution Prevention/Good Housekeeping					
X	X	X	X	X	F.1 Employee Training Program
					F.2 Inspection and Maintenance Program
					F.3 Municipal Operations Storm Water Control
					F.4 Municipal Operations Waste Disposal
X	X	X	X	X	F.5 Flood Management/Assess Guidelines
					F.6 Other Municipal Operations Controls

Part E2. Status of Compliance with Permit Conditions

The Lake County Stormwater Management Commission (SMC) will serve as a Qualifying Local Program for MS4s in Lake County. As part of ongoing services, SMC will perform functions related to each of the six minimum control measures. The status of BMPs and measurable goals performed in Year 5 are described below.

1. Public Education and Outreach

The SMC committed to conduct Public Education and Outreach as part of its ongoing countywide services. Public Education and Outreach requires implementation of a program to distribute educational material to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants to stormwater runoff. The status or progress for each of the measurable goals related to these BMPs is presented below.

A.1 Distributed Paper Material

Measurable Goals: *-Distribute informational materials from "take away" rack at SMC.*
-Distribute materials to MS4s for local distribution.

Various NPDES II related information is available on SMC's "take away" rack and on its website. This information is distributed to MS4s through mail-outs and in PDF format for use on MS4 websites.

A.3 Public Service Announcement

Measurable Goals: *-Include public service announcement highlighting community accomplishments related to the NPDES Phase II process in "Mainstream" once annually.*
-Post watershed identification signage with LCDOT.

Two articles were featured in *"Mainstream"* on local MS4 activities. Eight watershed planning signs were installed by LCDOT.

A.4 Community Event

Measurable Goals: *-Co-sponsor workshop on NPDES related topic.*

Three APWA/SMC co-sponsored workshops were held: May 10, 2007 on the NPDES permit program and status in Lake County; Oct. 24 & 25, 2007 on implementing a local IDDE program.

A.6 Other Public Education

Measurable Goals: *-Maintain and update the NPDES Phase II portion SMC website with resource materials such as model ordinances, case studies and brochures.*

As information becomes available, it is posted and/or distributed to MS4s.

2. Public Participation/Involvement

The SMC will support Lake County MS4s by performing activities and services related to the Public Participation/Involvement minimum control measure. BMPs will be implemented as described below.

B.1 Public Panel

Measurable Goals: *-Provide notice of public meetings on SMC website.*
-Track number of meetings conducted.

Notice of all public meetings was provided by SMC on their website's calendar of events. SMC tracked the number of Stormwater Management Committee Board meetings, Technical Advisory Committee (TAC) meetings, and Watershed Management Board (WMB) meetings held during the 2007 fiscal year. According to records, there were 11 SMC meetings, 10 TAC meetings, and 1 WMB meeting conducted during this period.

B.3 Stakeholder Meeting

Measurable Goals: *-Provide notice of stakeholder meetings on SMC website.*
-Track number of watershed planning committee meetings conducted.
-Establish watershed planning committees for each new watershed planning effort.

Notice of all stakeholder meetings was provided by SMC on their website's calendar of events. SMC tracked the number of stakeholder meetings for the various committees held during the 2007 fiscal year. The list below provides the stakeholder meeting and number of occurrences during the 2007 fiscal year:

North Branch Ecosystem Partnership BMP Selection Committee –5
North Branch Planning Committee – 4
Indian Creek –2
Bull's Brook/Bull Creek – 5
Dead River/Kellogg Creek- 12

B.6 Program Coordination

Measurable Goals: *-Track number of MAC meetings conducted during Year 5.*
-Prepare draft report on Qualifying Local Program activities at end of Year 5.
-Assist MS4s in developing measurable goals for Year 5.

Four Municipal Advisory Committee (MAC) meetings were held during Year 5 of the permit. The status of QLP activities at the end of Year 5 is provided in Part E2 of the Annual Facility Inspection Report (Annual Report) for each BMP which SMC committed to in the General Permit. The QLP measurable goals for Year 6 are in Part E4 of the Annual Report.

3. Illicit Discharge Detection and Elimination

The SMC committed to provide some supporting functions to MS4s for meeting the Illicit Discharge Detection and Elimination minimum control. The status or progress for each of the measurable goals related to these BMPs is presented below.

C.10 Other Illicit Discharge Controls

Measurable Goals: *-Track number of attendees to the Illicit Discharge Detention and Elimination workshop.*

The Illicit Discharge Detection and Elimination Workshop was held on October 24th and 25th. 111 people attended the workshop.

4. Construction Site Runoff Control

Lake County has adopted a Watershed Development Ordinance (WDO) that establishes the minimum stormwater management requirements for development in Lake County. The WDO, which is enforced by SMC as well as by certified communities in the county, establishes standards for construction site runoff control. The enforcement of the WDO, in conjunction with other SMC activities and functions, implements BMPs. The status or progress for each of the measurable goals related to these BMPs is presented below.

D.1 Regulatory Control Program

Measurable Goals: *-Continue to enforce the countywide WDO.*
-Initiate and administer the Designated Inspector Program as outlined by the WDO.

SMC continues to enforce the countywide WDO.
The DECI Program began on April 1, 2007. The DECI program was designed to assist regulatory agencies and the development community to meet the soil erosion and sediment control (SE/SC) standards of the Lake County Watershed Development Ordinance (WDO) as well as set standards for site inspections, site reporting and record keeping. Qualifications to be listed as a DECI include completion of a SMC approved SE/SC course, a passing grade on the SMC instituted DECI Exam

and 2 years SE/SC inspection experience in the upper Midwest region or registration as a Certified Professional in Erosion and Sediment Control (CPESC).
To date, SMC has approved and listed approximately 225 Designated Erosion Control Inspectors.

D.2 Erosion and Sediment Control BMPs
Measurable Goals: *-Continue enforcement of the countywide WDO.*
-Continue updates to the TRM as needed.

SMC continues to enforce the countywide WDO. SMC continues to review and approve TRM to coincide with previous WDO amendments.

D.3 Other Waste Control Program
Measurable Goals: *-Continue enforcement of countywide WDO.*

SMC continues to enforce the countywide WDO.

D.4 Site Plan Review Procedures
Measurable Goals: *-Track number of enforcement officers who have passed the exam.*
-Track the number of enforcement officers who attend training sessions on WDO and -TRM revisions.
-Track number of communities that undergo a performance review.

A Community's authority to enforce the Lake County Watershed Development Ordinance (WDO) is based upon their certification status. Lake County currently has 40 certified communities not including unincorporated Lake County. Of those, 14 also have the authority to enforce the wetland provisions of the WDO. 13 communities are considered non-certified. Certified communities are required to petition for certification every 3 years. January 1, 2007 was the start of the next certification period for all communities.

Certified communities are required to have at least 1 Enforcement Officer (EO) oversee the WDO enforcement within their community. The WDO requires all EOs to be qualified to fulfill the duty of EO by: attending mandatory training, passing the EO Examination, and providing verification of a minimum of 24 work-related professional development hours within the 3-year certification period. All EOs are required to be re-qualified every 3 years. There are currently 60 EOs.

D.5 Public Information Handling Procedures
Measurable Goals: *-Track number of complaints received and processed related to soil erosion and sediment control.*

19 SE/SC complaints were received and processed.

D.6 Site Inspection/Enforcement Procedures
Measurable Goals: *-Track number of site inspections conducted by SMC.*

Between March 2007 and March 2008, approximately 641 site inspections were conducted.

5. Post-Construction Runoff Control
As described above, the Lake County Watershed Development Ordinance (WDO) establishes the minimum stormwater management requirements for development in Lake County. The WDO establishes standards for post-construction site runoff control. These standards apply to any new development or redevelopment resulting in over 0.5 acres of new impervious area. The enforcement of the WDO, in conjunction with other SMC activities and functions, implements BMPs. The status or progress for each of the measurable goals related to these BMPs is presented below.

E.2 Regulatory Control Program
Measurable Goals: *-Continue to enforce the countywide WDO.*

SMC continues to enforce the countywide WDO. Approximately 40 violation notifications were resolved successfully between March 2007 and March 2008.

E.3 Long Term O&M Procedures
Measurable Goals: *-Continue to enforce the countywide WDO.*

SMC continues to enforce the countywide WDO which requires an operations and maintenance plan for all permitted stormwater/water quality treatment facilities. Staff members continue to distribute maintenance information throughout the County, and provide technical materials and assistance to Home Owners Associations.

E.4 Pre-Construction Review of BMP Designs
Measurable Goals: *-Continue to enforce the countywide WDO.*
-Conduct annual WMB meeting and allocate funds for in-the-ground BMPs.

SMC continues to enforce the countywide WDO. SMC continues to add to its technical reference library, additional BMP technology as it becomes available.

E.5 Site Inspections During Construction
Measurable Goals: *-Continue to enforce the countywide WDO.*

SMC continues to enforce the countywide WDO, which requires inspections at prescribed points during development.

E.6 Post-Construction Inspections
Measurable Goals: *-Continue to enforce the countywide WDO.*

SMC continues to enforce the countywide WDO. Post-construction inspections are conducted on an as-needed basis.

E.7 Other Post-Construction Runoff Controls
Measurable Goals: *-Conduct annual WMB meeting.*
-Contribute funding to water quality improvement projects, including BMP retrofits, through the WMBs.

The annual WMB meeting was held on December 13, 2007. There were 9 BMP construction projects approved for WMB funding. Part E5 contains a list of ongoing construction projects through the WMB program.

6. Pollution Prevention/Good Housekeeping
This minimum control measure involves the development and implementation of an operation and maintenance program to reduce the discharge of pollutants from municipal operations. This program must include a training program for municipal employees. SMC committed to assist the MS4s with BMPs. The status or progress for each of the measurable goals related to these BMPs is presented below.

F.1 Employee Training Program
Measurable Goals: *-Provide links to available resources on website.*

SMC continually passes along information on training opportunities and resources to MS4's.

F.5 Flood Management/Assess Guidelines
Measurable Goals: *-Track number of projects that are reviewed for multi-objective opportunities.*

There were 12 SMC sponsored multi-objective projects reviewed.

Part E3. Information and Data Collection Results

Year 5 activities consisted primarily of permit program planning efforts. Therefore, no information or monitoring data was collected during this period.

Part E4. Summary of Year 6 Stormwater Activities

The table shown below summarizes the BMPs committed to for Year 6. Specific BMPs and measurable goals for Year 6 program development activities are presented in the sections following the table.

Note: X indicates BMPs committed to for Year 6.

Year 6 QLP	
A. Public Education and Outreach	
X	A.1 Distributed Paper Material
	A.2 Speaking Engagement
X	A.3 Public Service Announcement
X	A.4 Community Event
	A.5 Classroom Education Material
X	A.6 Other Public Education
B. Public Participation/Involvement	
X	B.1 Public Panel
	B.2 Educational Volunteer
X	B.3 Stakeholder Meeting
	B.4 Public Hearing
	B.5 Volunteer Monitoring
X	B.6 Program Coordination
	B.7 Other Public Involvement
C. Illicit Discharge Detection and Elimination	
	C.1 Storm Sewer Map Preparation
	C.2 Regulatory Control Program
	C.3 Detection/Elimination Prioritization Plan
	C.4 Illicit Discharge Tracing Procedures
	C.5 Illicit Source Removal Procedures
	C.6 Program Evaluation and Assessment
	C.7 Visual Dry Weather Screening
	C.8 Pollutant Field Testing
	C.9 Public Notification
X	C.10 Other Illicit Discharge Controls

Year 6 QLP	
D. Construction Site Runoff Control	
X	D.1 Regulatory Control Program
X	D.2 Erosion and Sediment Control BMPs
X	D.3 Other Waste Control Program
X	D.4 Site Plan Review Procedures
X	D.5 Public Information Handling Procedures
X	D.6 Site Inspection/Enforcement Procedures
	D.7 Other Construction Site Runoff Controls
E. Post-Construction Runoff Control	
	E.1 Community Control Strategy
X	E.2 Regulatory Control Program
X	E.3 Long Term O&M Procedures
X	E.4 Pre-Const Review of BMP Designs
X	E.5 Site Inspections During Construction
X	E.6 Post-Construction Inspections
X	E.7 Other Post-Const Runoff Controls
F. Pollution Prevention/Good Housekeeping	
X	F.1 Employee Training Program
	F.2 Inspection and Maintenance Program
	F.3 Municipal Operations Storm Water Control
	F.4 Municipal Operations Waste Disposal
X	F.5 Flood Management/Assess Guidelines
	F.6 Other Municipal Operations Controls

SMC has committed to creating a Stormwater Management Program Plan (SMPP) template that can be reviewed and revised by each MS4, to enhance their existing program. The SMPP template would address each of the six Minimum Control Measures of the General Permit. Please refer to the preamble of the 2008 NOI application for additional information on the SMPP template. It is anticipated that the enhanced SMPP template will be received from SMC by mid Year 6.

1. **Public Education and Outreach**
   The SMC will conduct Public Education and Outreach as part of its ongoing countywide services. Public Education and Outreach requires implementation of a program to distribute educational material to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants to stormwater runoff.

A.1 Distributed Paper Material
The SMC develops and distributes a variety of materials related to stormwater management in Lake County. A number of pamphlets and brochures related to BMPs and stormwater management have been produced. SMC prepares a quarterly newsletter, "Mainstream" as well as an Annual Report that highlights the stormwater management activities in Lake County. SMC also prepares Project Fact Sheets that provide information on ongoing and recently completed stormwater management projects. SMC will develop or collaborate on manuals or manual updates related to stormwater management.

Measurable Goals: *Distribute informational materials from "take away" rack at SMC.*
Upon request, distribute materials directly to municipalities for local distribution.
Recommend measures to address this BMP in SMPP template.

A.3 Public Service Announcement
A public service announcement related to the NPDES Phase II program will be written and included in the Quarterly Newsletter, "Mainstream." SMC will coordinate with Lake County Department of Transportation (LCDOT) to post watershed identification signage in watersheds where watershed planning activities occur.

Measurable Goals: *Include public service announcement highlighting community accomplishments related to the NPDES Phase II process in "Mainstream" once annually.*
Post watershed identification signage with LCDOT.

A.4 Community Event
The SMC sponsors technical training and public awareness workshops. SMC and the local APWA chapter will co-sponsor a workshop on management practices to protect water quality.

Measurable Goals: *Conduct or Co-sponsor workshop on NPDES related topic.*
Recommend measures to address this BMP in SMPP template

BMP No. A.5: Classroom Education
The SMC will contribute to the development and compilation of a stormwater educational material kit for local teachers.

Measurable Goals: *Develop and compile information for stormwater educational kit for distribution upon request.*
Provide materials and training on storm sewer inlet stenciling kits to teachers upon request.

A.6 Other Public Education
The SMC operates a website that provides many resources for citizens, developers, engineers, and municipalities. The website includes pages such as "Citizens Assistance", "Watershed Planning", "Projects", "Best Management Practices", "Publications", "Press Releases" and "Links." These pages provide notices of upcoming meetings and ongoing projects, allow for download of many SMC documents, and provide links to other NPDES II and BMP resources.

Measurable Goals: *Maintain and update the NPDES Phase II portion SMC website with resource materials such as model ordinances, case studies and brochures.*
Recommend measures to address this BMP in SMPP template.

2. Public Participation/Involvement

The SMC will support Lake County MS4s by performing activities and services related to the Public Participation/Involvement minimum control measure.

B.1 Public Panel

The SMC coordinates and conducts public meetings and committee meetings that include public representation. A monthly Stormwater Management Commission meeting is open to the public and also includes the SMC Board of Commissioners, which includes six municipal representatives and six county board members.

The Technical Advisory Committee (TAC) was started in 1992 to assist in the development, revision and review of the Watershed Development Ordinance (WDO) standards and administrative procedures. TAC is made up of representatives from the development, environmental, municipal and consultant engineering fields. TAC meetings are held monthly or on an as-needed basis.

The Municipal Advisory Committee (MAC) is made up of municipal, township, drainage district, consulting and county representatives. The MAC will continue to meet as needed during the implementation of the NPDES Phase II stormwater management program.

The Watershed Management Boards (WMBs) meet yearly to make recommendations on BMP project funding. Members include chief municipal elected officials, township supervisors, drainage district chairs, and county board members from each district within the boundaries of the watersheds.

Measurable Goals: *-Provide notice of public meetings on SMC website.*
-Track number of meetings conducted.

B.3 Stakeholder Meeting

The SMC is actively involved in watershed planning throughout Lake County. SMC believes that the watershed planning process cannot happen and will not be successful without the input, interest and commitment of stakeholders. Stakeholders may include municipalities, townships, drainage districts, homeowner associations, developers, county agencies, lakes management groups, landowners and local, state and federal agencies.

Measurable Goals: *Provide notice of stakeholder meetings on SMC website.*
Track number of watershed planning committee meetings conducted.
Establish watershed planning committees for each new watershed planning effort.
Recommend measures to address this BMP in SMPP template

B.6 Program Coordination

The Countywide Approach to NPDES Phase II Permitting Summary identifies the role of SMC as a Qualifying Local Program. The SMC proactively formed the Municipal Advisory Committee (MAC) to facilitate coordination of the NPDES Phase II stormwater program in Lake County. SMC also prepared a presentation that can be used by municipal representatives to inform their board members about the NPDES II program and how it will be implemented in Lake County through existing local resources and programs. \SMC will continue to coordinate the program and provide guidance for the regulated MS4s by continuing to facilitate MAC meetings through the program implementation phase. SMC will prepare a draft report on the Qualifying Local Program activities and provide guidance to MS4s in preparing their annual reports.

Measurable Goals: *Track number of MAC meetings conducted during Year 6.*
Prepare draft report on Qualifying Local Program activities at end of Year 6.

BMP No. B.7: Other Public Involvement

Measurable Goals: *Recommend measures to address this BMP in SMPP template, if appropriate.*

3. **Illicit Discharge Detection and Elimination**
MS4s are required to perform activities related to the Illicit Discharge Detection and Elimination (IDDE) minimum control. The requirements of an IDDE program include the following:
   - Develop a storm sewer system map that shows the locations of all outfalls and the names and locations of all waters of the US that receive discharges from those outfalls.
   - Prohibit non-storm water discharges into the storm sewer system and implement appropriate enforcement procedures and actions.
   - Develop and implement a plan to detect and address illicit discharges into the storm sewer system.
   - Educate public employees, businesses and general public of hazards associated with illegal discharges and improper disposal of waste.
   - Identify the appropriate best management practices and measurable goals.

The SMC will provide a SMPP template that includes recommended measures to be implemented by the MS4s. Additionally, SMC is committed to providing some supporting additional functions to MS4s for meeting the Illicit Discharge Detection and Elimination minimum control.

BMP No. C.1: Storm Sewer Map Preparation

Measurable Goals: *Recommend measures to address this BMP in SMPP template.*

BMP No. C.2: Regulatory Control Program
The SMC provided model ordinance examples for MS4s to consider at the local level. The model ordinance language will prohibit non-storm water discharges to the storm sewer or drainage system. Additionally, the WDO includes provisions, which prohibit illegal dumping to the storm sewer or drainage system.

Measurable Goal: *Continue to enforce the countywide WDO.*

BMP No. C.3: Detection/Elimination Prioritization Plan

Measurable Goals: *Recommend measures to address this BMP in SMPP template.*

BMP No. C.4: Illicit Discharge Tracing Procedures

Measurable Goals: *Recommend measures to address this BMP in SMPP template.*

BMP No. C.5: Illicit Source Removal Procedures

Measurable Goals: *Recommend measures to address this BMP in SMPP template.*

BMP No. C.6: Program Evaluation and Assessment

Measurable Goals: *Recommend measures to address this BMP in SMPP template.*

BMP No. C.7: Visual Dry Weather Screening

Measurable Goals: *Recommend measures to address this BMP in SMPP template.*

BMP No. C.9: Public Notification

Measurable Goals: *Recommended measures to address this BMP may be included in the SMPP template.*

4. **Construction Site Runoff Control**
Lake County has adopted a Watershed Development Ordinance (WDO) that establishes the minimum stormwater management requirements for development in Lake County. The WDO, which is enforced by SMC as well as by certified communities in the county, establishes standards for construction site runoff control. The

enforcement of the WDO, in conjunction with other SMC activities and functions implements BMPs, as described below.

D.1 Regulatory Control Program
The WDO has been adopted as the regulatory mechanism to require erosion and sediment controls for construction activities in Lake County. The soil erosion and sedimentation control performance standards are included in Article IV, Section B.1.j. of the WDO. At a minimum, these standards apply to any development that hydrologically disturbs 5,000 square feet or more.

SMC initiated a Designated Erosion Control Inspector (DECI) Program, which originated out of an assessment of WDO implementation during the original NOI period. The purpose of the DECI program is to facilitate positive communication between the permit issuing agency or community and the permit holder by creating a single point of contact for soil erosion/sediment control issues with the idea that it is easier to prevent soil erosion and sediment control problems than it is to correct them after they have occurred. Further, the program is intended to improve site conditions, minimize environmental impacts, and educate contractors/developers/inspectors about proper soil erosion/sediment control Best Management Practices. The DECI program was designed to closely mirror the inspection requirements of the IEPA NPDES Phase II permit (for individual construction sites).

Measurable Goals: *Continue to enforce the countywide WDO.*
Initiate and administer the Designated Inspector Program as outlined by the WDO.
Recommend measures to address this BMP in SMPP template.

D.2 Erosion and Sediment Control BMPs
Article IV, Section B.1.j of the WDO specifies the required soil erosion and sediment control measures for any land disturbance activity. This section of the WDO includes 15 requirements for soil erosion and sediment control measures including: minimize soil disturbance; protect adjoining properties from erosion and sedimentation; complete installation of soil erosion and sediment control features prior to commencement of hydrologic disturbance; stabilize disturbed areas within 14 days of active disturbance; avoid disturbance of streams and when possible, size measures appropriate to the amount of tributary drainage area; protect functioning storm sewers from sediment; prevent sediment from being tracked onto adjoining streets; limit earthen embankments to slopes of 3H:1V; identify soil stockpile areas; and utilize statewide standards and specifications as guidance for soil erosion and sediment control.

The SMC has also prepared the Technical Reference Manual (TRM) for the WDO. The TRM is used to guide compliance with the WDO and provides detailed information on soil erosion and sedimentation control BMPs. The TRM is currently being updated and expanded to include BMP guidance chapters on Wetland Areas, Public Roadways, and Ordinance Administration and Enforcement.

Measurable Goal: *Continue to enforce the countywide WDO.*
Complete TRM updates, approve and publicize final TRM.
Recommend measures to address this BMP in SMPP template.

D.3 Other Waste Control Program
The WDO includes provisions regarding the control of waste and debris at construction sites.

Measurable Goal: *Enforce WDO provisions regarding the control of waste and debris at construction sites.*
Recommend measures to address this BMP in SMPP template.

BMP No. D.4: Site Plan Review Procedures
Within each jurisdiction, one of the primary duties of the enforcement officer is to review all Watershed Development Applications and issue permits for those projects that are in compliance with the provisions of the WDO. SMC provides training for all new enforcement officers and enforcement officers must pass an exam in order to be certified. SMC periodically reviews all certified communities' Ordinance enforcement records and

performance. Ongoing updates to the TRM include the addition of sections that discuss Ordinance Administration and Enforcement.

Measurable Goals: *Track number of enforcement officers who have passed the exam.*
Track number of communities that undergo a performance review.
Complete Ordinance Administration Chapter of TRM.
Recommend measures to address this BMP in SMPP template.

BMP No. D.5: Public Information Handling Procedures
The SMC provides a number of opportunities for receipt and consideration of information submitted by the public. The Citizen Inquiry Response System (CIRS) documents and tracks the resolution of reported problems and citizen complaints. SMC's website provides information on "Who to call" for various problems or concerns. An Interagency Coordination Agreement between SMC and the U.S. Army Corps of Engineers, the Lake County Soil and Water Conservation District and the National Resources Conservation Service specifies that if any of these agencies receive a report of a soil erosion and sediment control issue, they will contact SMC. SMC will then investigate the report and prescribe corrective action to the property owner or coordinate with the certified community to find a solution.

Measurable Goal: *Track number of complaints received and processed related to soil erosion and sediment control.*
Recommend measures to address this BMP in SMPP template.

BMP No. D.6: Site Inspection/Enforcement Procedures
Article VI of the WDO provides both the recommended and the minimum requirements for site inspection. The enforcement officers within each certified community must conduct site inspections. SMC has direct responsibility for non-certified communities, LCDOT, and the Lake County Forest Preserve. Article VII of the WDO specifies the penalties and legal action that may be imposed if the WDO is violated. If a construction site is not in compliance with the requirements of the WDO, the jurisdictional enforcement officer may issue a stop work order on all development activity on the subject property or on the portion of the activity in direct violation of the WDO. In addition, failure to comply with any of the requirements of the WDO constitutes a violation, and any person convicted thereof may be fined.

Measurable Goals: *Track number of site inspections conducted by SMC.*
Recommend measures to address this BMP in SMPP template.

5. Post-Construction Runoff Control
As described above, the Lake County Watershed Development Ordinance (WDO) establishes the minimum stormwater management requirements for development in Lake County. The WDO establishes standards for post-construction site runoff control. These standards apply to any new development or redevelopment that results in over 0.5 acres of new impervious area. The enforcement of the WDO, in conjunction with other SMC activities and functions, implements the BMPs, as described below.

BMP No. E.2: Regulatory Control Program
The WDO requires that all applicants adopt a stormwater management strategy for controlling post-construction runoff. The applicant must develop a stormwater management strategy that minimizes the increase in runoff volumes and rates and addresses the water quality treatment requirements of the WDO. The proposed drainage plan must use the runoff reduction hierarchy in the WDO and implement BMPs as presented in the TRM. The WDO also requires the use of buffers when adjacent to existing water bodies.

Measurable Goal: *Continue to enforce the countywide WDO.*
Recommend measures to address this BMP in SMPP template.

BMP No. E.3: Long Term O&M Procedures
The WDO requires that a maintenance plan be prepared for all stormwater management system components for Major developments (as defined by the WDO). Enforcement officers may require maintenance plans to be prepared for all development sites that require a NPDES permit. The maintenance plan must include:

maintenance tasks; the party responsible for performing the maintenance tasks; a description of all permanent public or private access maintenance easements and overland flow paths, and compensatory storage areas; and a description of dedicated sources of funding for the required maintenance. The TRM includes a sample maintenance plan. The Ordinance also requires that all stormwater management systems be located and described within a deed or plat restriction to ensure perpetuity and access for maintenance.

Measurable Goal: *Continue to enforce the countywide WDO.*
Recommend measures to address this BMP in SMPP template.

BMP No. E.4: Pre-Construction Review of BMP Designs
Within each jurisdiction, one of the primary duties of the enforcement officer is to review all Watershed Development Applications and issue permits for those projects that are in compliance with the provisions of the WDO. This includes a review of the proposed BMPs for post-construction runoff control.

Measurable Goal: *Continue to enforce the countywide WDO.*
Recommend measures to address this BMP in SMPP template.

BMP No. E.5: Site Inspections During Construction
Article VI of the WDO provides both the recommended and the minimum requirements for site inspection. The enforcement officers for each certified community must conduct these inspections. Enforcement officers may inspect site development at any stage in the construction process. For major developments, the enforcement officer shall conduct site inspections, at a minimum, upon completion of installation of sediment and runoff control measures and after final stabilization and landscaping, prior to removal of sediment controls.

Measurable Goal: *Continue to enforce the countywide WDO.*
Recommend measures to address this BMP in SMPP template.

BMP No. E.6: Post-Construction Inspections
(See description of the inspection program provided under E.5)

Measurable Goal: *Continue to enforce the countywide WDO.*
Recommend measures to address this BMP in SMPP template.

BMP No. E.7: Other Post-Construction Runoff Controls
Through the Watershed Management Board (WMB), SMC reviews and partially funds projects related to drainage and water quality improvements. The WMB representing the Lake Michigan, North Branch of the Chicago River, Fox and Des Plaines watersheds -- meets yearly to make recommendations on project funding. Members include chief municipal elected officials, township supervisors, drainage district chairs, and county board members from each district within the boundaries of the watershed. The goal of the WMB is to maximize opportunities for local units of government and other groups to have input and influence in local stormwater management problem solving. Projects have improved quality of water in streams and swales, and have enhanced stormwater facilities.

Measurable Goals: *Conduct annual WMB meeting.*
Contribute funding to water quality improvement projects, including BMP retrofits, through the WMB.

6. Pollution Prevention/Good Housekeeping

This minimum control measure involves the development and implementation of an operation and maintenance program to reduce the discharge of pollutants from municipal operations and an associated training program.
BMP No. F.1: Employee Training Program
The SMC will assist MS4s in developing programs for F.1 by incorporating recommended actions into the SMPP template. Additionally, SMC will serve as technical advisors and as a clearinghouse of information related to employee training BMPs and periodically offer training programs.

Measurable Goal: *Provide list of available resources to MS4s.*
Provide employee training workshops.
Include training recommendations in SMPP template.

BMP No. F.2: Inspection and Maintenance Program

Measurable Goal: *Recommend measures to address this BMP in SMPP template.*

BMP No. F.3: Municipal Operations Storm Water Control

Measurable Goal: *Recommend measures to address this BMP in SMPP template.*

BMP No. F.4: Municipal Operations Waste Disposal

Measurable Goal: *Recommend measures to address this BMP in SMPP template.*

BMP No. F.5: Flood Management/Assess Guidelines
By adopted policy in the Lake County Stormwater Management Plan, SMC's standard operating procedure is to assess the feasibility of implementing water quality functions in all flood control designs. SMC will evaluate all SMC-sponsored projects for multi-objective opportunities.

Measurable Goal: *Track number of projects that are reviewed for multi-objective opportunities.*

BMP No. F.6: Other Municipal Operations Control

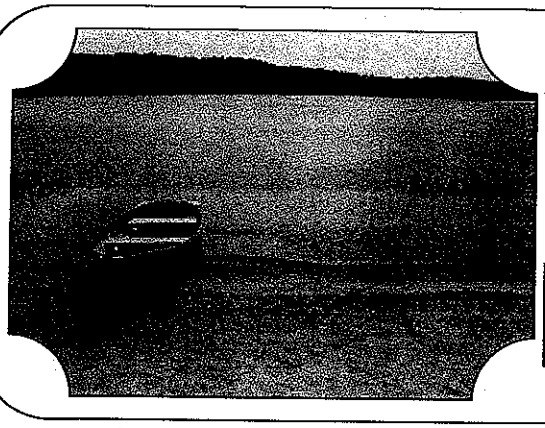
Measurable Goal: *Recommend measures to address this BMP in SMPP template.*

Part E5. Construction Projects Conducted During Year 5

Project Name	Project Size (acres)	Construction Start Date	Construction End Date
WMB-Deer Park Rain Gardens	2	6/07	11/07
Round Lake Drain	5	9/07	5/08
Green Oaks-Middle Fork Tributary Restoration	1.14	1/07	6/07
Amhurst Lakes Ponds F & G Buffers	2	1/07	5/07
Foss Golf Course	2	5/07	12/07

Part F. Construction Projects Conducted During Years 5 & 6

Project Name	Project Size (acres)	Construction Start Date	Construction End Date
Midlothian Road at Winchester Road	0.25 linear miles	August 2006	April 2008
Butterfield Road – IL Rt 176 to IL Rt 137	2.0 linear miles	September 2006	July 2008
Buffalo Grove Rd at Indian Creek	0.25 linear miles	March 2007	May 2008
Fairfield Rd at Gilmer Rd	1.0 linear miles	July 2006	November 2007
Cedar Lake Rd – Townline Rd to IL Route 60	1.0 linear miles	July 2006	November 2007
Delany Rd at Sunset Ave	0.5 linear miles	July 2006	November 2007
Sunset Ave – Delany Rd to IL Rt 131	1.0 linear miles	June 2007	October 2008
Deerfield Pkwy – IL Rt 83 to Weiland Rd	1.1 linear miles	July 2005	May 2007
Washington St – IL Route 21 to US Route 41	2.0 linear miles	July 2008	May 2010
Darrell Rd at Barnett Rd	0.75 linear miles	October 2008	May 2010
Monaville Rd at Grant Woods FP	0.25 linear miles	June 2007	June 2008
Yorkhouse Rd at McAree Rd	0.25 linear miles	September 2007	August 2008
Deerfield Rd – Wilmot Rd to Saunders Rd	0.8 linear miles	November 2007	May 2009
Everett Rd – Old Barn Lane to Riverwoods Rd	0.75 linear miles	August 2007	June 2008
Gilmer Rd at Diamond Lake Rd	0.25 linear miles	November 2007	September 2008
Gilmer Rd at Indian Creek Rd	0.25 linear miles	November 2007	September 2008
Hainesville Rd – Avon Twp to Washington St	0.3 linear miles	May 2008	May 2009
Rollins Rd – 0.25 miles E of Washington Ave.	0.20 linear miles	June 2007	October 2007
Skokie Valley BP – IL Rt 176 to Laurel Ave.	1.5 linear miles	April 2008	August 2009
West Park Ave E of US Rt 41	0.50 linear miles	October 2008	October 2009
Fairfield Rd at Nippersink Rd	0.25 linear miles	July 2008	October 2009
Hutchins Rd – IL Rt 132 to Stearns Schl Rd	1.5 linear miles	July 2008	May 2009
MLK Jr Drive – Il Rt 131 to W of Sheridan	1.0 linear miles	August 2008	November 2010
Delany Rd at August Zupec	0.25 linear miles	June 2008	October 2008
Fairfield Rd at Bonner Rd	0.25 linear miles	August 2008	May 2009
Hainesville Rd BP – Avon Twp to IL Rt 120	0.75 linear miles	August 2008	September 2009
Midlothian Rd – Peterson Rd to Casey Rd	1.5 linear miles	May 2008	November 2010
Midlothian Rd BP – IL Rt 176 to Casey Rd	3.0 linear miles	May 2008	November 2010
North Ave – IL Rt 83 to Deep Lake Rd	3.0 linear miles	June 2009	November 2010
Winchester Rd at IL Route 21 Turn Lane	0.10 linear miles	August 2008	November 2009
Hutchins Rd – US 45 to Stearns School Rd	0.7 linear miles	June 2006	October 2007
East Branch Court Complex – Park City	7.7 Acres	June 2007	June 2009
Central Permit Facility - Libertyville	23.3 Acres	July 2008	August 2010
Salt Storage Facility – LCDOT Libertyville	5 Acres	August 2008	November 2009
Butler Lake Restoration Project - Libertyville	10 Acres	June 2006	September 2008
LCPW Watermain Replacements – Various	5 Acres	May 2007	November 2008
LCPW Grandwood Park Elevated Storage Tank	5 Acres	May 2007	May 2009
Levee Improvements – N Libertyville Estates	10 Acres	May 2007	November 2008
LCPW Facilities Paving – Vernon Hills	5 Acres	May 2007	September 2007
Structures Demolition – 104-124 MLK Jr Ave	2.5 Acres	August 2006	December 2007
Mundelein Branch Court Parking Lot	1 Acre	Sept 2008	Nov 2008
ITS Fiber Optic Phase II – Various Locations	3 Acres	May 2008	May 2009



Cattail Chronicles

Issues Affecting the Surface Waters of Lake County

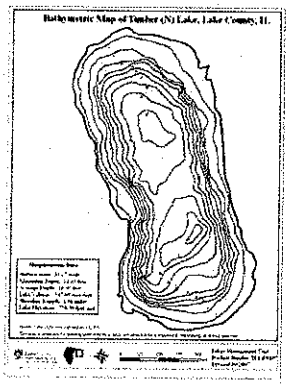
Volume 18, Issue 1 Spring 2008

A lake you should know- Timber (Huntley) Lake

By: Mike Adam

If you are familiar with this lake in northern Lake County and are describing it to someone, you may have to call it by a number of names before that person knows what you are talking about: Timber Lake, Timber Lake North, Huntley's Lake, Old Huntley Lake, Pollock Lake, and that lake in the Raven Glen Forest Preserve. All of these names would be correct. For the sake of simplicity, we will call it Timber Lake.

Timber Lake is located west of Highway 45 and south of Highway 173. One landowner owns much of the western shoreline, which consists of numerous small rental cottages. The land adjacent to the northeast corner of the lake was a campground that included a beach until 2000. The Lake County Forest Preserve District (LCFPD) purchased the campground property and adjacent land in 2000. They now own almost 95% of the lake bottom, the southern and eastern shorelines, and approximately half of the northern shoreline. Since purchasing the property the LCFPD has completed significant improvements to the area including wetland and woodland restoration and the installation of educational trails, fishing piers, overlooks, a picnic area, and trails for hiking, biking, and horseback riding. Future trail access is planned at the northwest, southwest, and southeast corners of the property. Currently there is no beach at the lake.



Bathymetric map of Timber Lake

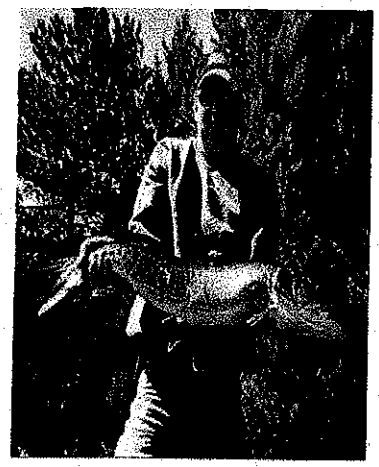
Continued on pg 4

For information contact:

The Lakes Management Unit
Environmental Health Services
847- 377- 8030
http://www.co.lake.il.us/health/ehs/lakes.asp

LakeCounty
Health Department and
Community Health Center

Spotlighting Wildlife: Muskellunge (*Esox masquinongy*)



Leonard Dane (LMU) with a 38" Musky caught and released

By: Leonard Dane

The Muskellunge, also known as Musky or Muskie, is a highly prized gamefish in North America. Some reasons for their popularity include their large size, aggressive nature, and willingness to attack just about any type of lure. Although natural populations have been extirpated in Illinois, they have frequently been stocked in many lakes and reservoirs. In addition to the Chain O' Lakes, Musky have been found by the Illinois Department of Natural Resources in five other lakes in Lake County. Clear lakes with submersed beds of vegetation along with quiet backwater pools of river are the preferred habitat of the Musky.

"SOME REASONS [redacted] TO [redacted] YPE OF LURE."

The Muskellunge is a member of the Family Esocidae (Pike), which also includes the Grass Pickerel and Northern Pike. A Musky differs from the others by having the lower halves of the opercles and cheeks scaleless. The coloring is olive, brown, or green with patterns of dark spots. The Musky will have 17 – 19 branchiostegals (membranes covering the underside of the gills) and 6 – 9 small sensory pores on the lower jaw.

Although spawning has not been documented in Lake County, it typically occurs from mid-April to mid-May when the water temperature is between 49° - 60° F and in depths of 6 – 30 inches. Other factors such as increases in daylight and oxygen may trigger the spawning cycle. Eggs are deposited along the shoreline after sunset and before sunrise as the males swim alongside the female and fertilize the eggs as they are laid. After 8 – 14 days, young musky will hatch with a yolk sac in place for feeding. Once the yolk sac is consumed, the small fish eat zooplankton before switching to a diet of fish.

Like the other pike, Musky are highly predacious fish eaters. As solitary hunters, they hide in aquatic vegetation and search for desirable prey. They can begin eating fish as early as four days old and can grow to 12 inches in the first four months. During the first five years, the Musky puts its energy into rapid growth with the majority of growth occurring June through September when there is an abundance of forage. After five years, the energy shifts from increasing length to increasing weight. In an average lake, a length of 30 inches may be reached in five years.

Armed with these facts, plan a fishing trip for Muskellunge this coming spring or even next fall. Set your trolling motor to take you along the plant edge. Try both top water and deep diving lures to coax an awaiting fish out of the plants and onto your hook. The Musky has a reputation for being hard to catch. Known as the fish of 10,000 casts, it may take awhile, but once you get the fish in the boat, remember how long it took for the monster to reach the length it is, take a picture, and release it back into the water. This way you and someone else can experience the fight of the Musky as well.

Kelly's Corner Kitchen

Bluegill Chowder

4 slices of bacon
1/2c chopped onion
1/2c diced carrots
1/2c chopped celery
Juice from half a lemon
1 lb of bluegill in pieces
1 can of cooked potatoes
1c water
2t garlic pepper
1c heavy whipping cream
1 can cream corn

Fry bacon and reserve, in bacon drippings add onion, carrot, and celery to pan. Cook for 5 min. Stir in fish, potatoes, lemon juice, water, and garlic pepper. Bring to a boil then simmer covered for 10 min. Blend in cream and corn and heat through.

Spotlighting Plants: American Lotus (*Nelumbo lutea*)

By: Adrienne Orr

Nelumbo means "sacred bean" and in many cultures American Lotus is considered a symbol of beauty. It has many common names such as alligator buttons, duck acorns, rattlenuts, water chinquapin, yonkapin, and yockernut, which refer to the round, dark brown seeds. Native Americans believed Lotus was sacred and used the seeds and tubers of the plant as food. They would roast the seeds and eat them like peanuts or grind them into meal to make bread, mush, or dumplings. A few of the descendants of pioneer families in the Illinois valley still make enough flour from Lotus seeds to bake a holiday cake once a year. The rootstock, which has somewhat the flavor of a sweet potato when boiled, was also eaten.

American Lotus can be found from Massachusetts to Minnesota and south to Florida and Texas, and it is thought the Native Americans carried it across the Allegheny Mountains to the east coast for its food value. In Lake County, the pale yellow flowers of American Lotus can be seen in the Chain O'Lakes and Sullivan Lake. Back in the late 1800's, Grass Lake was almost entirely covered with this unique plant each summer. A visit by tour boats to the American Lotus beds became popular for vacationing Chicagoans in the 1890's. Today there are still areas of the Chain O' Lakes in which American Lotus blossoms. The Lakes Management Unit has mapped the beds on the Chain O' Lakes in 2000, 2001, 2002, and 2007, with an increase in the area they cover.

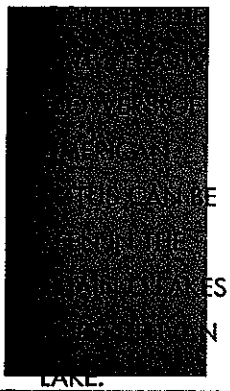
They may cover large areas in varying depths up to 8 feet and may have as many as 8,500 blooms per acre. In late spring the leaves, which can reach 2 feet in diameter, usually stand a foot or two above the surface of the water on thick stems. Then the flower buds appear in early summer and bloom in July. The yellow flowers are seen rising above the tallest leaves with a bright yellow pistil surrounded by dozens of stamens (pollen producing male organ). Flowers open in the morning and close at night for two days and then the petals begin to fall off. During this time cross-pollination occurs with the help of insects. Although the petals are gone, the center of the flower continues to grow until it is about 3 inches in diameter. This is the seed pod which can contain up to 20 seeds. These seed pods are often seen in dried floral arrangements in homes.

Plants can reproduce in one of three ways. First, American Lotus can use tubers (underground stems) to reproduce. Tubers are banana-shaped, can reach 10 inches in length, and weigh over a half pound. Lotus also has rhizomes (smaller stems), which creep along the bottom to produce additional plants. Thirdly, they can reproduce by seeds.

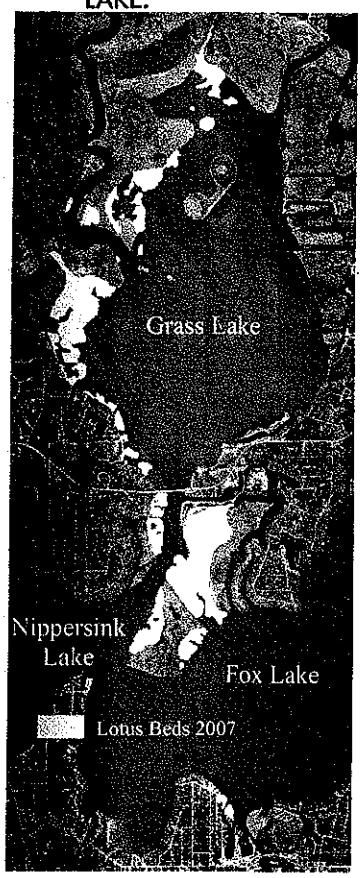
American Lotus is a food source for wildlife. The ducks utilize the seeds and beavers and muskrats eat the rhizomes. Lotus also provides habitat for many invertebrates. Although humans don't consider the plant to be sacred now, it is a native plant and is rare in this area. Steps should be taken to ensure its survival.

Grass Lake in the late 1800's.

"IN LAKE



LAKE."



Map of Lotus Beds on the Chain O' lakes 2007

Environmental Links

http://www.h2oconserve.org
Calculate your household water use and learn water saving tips.

http://www.gcycle.org/#
Find out where to recycle batteries, electronics, and computer equipment.

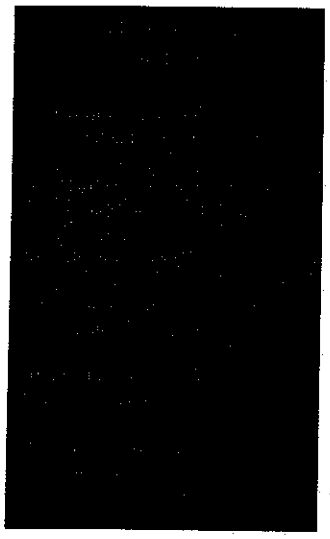
http://toxtown.nlm.nih.gov/

Timber Lake (continued from page 1)

Go Green
Go Paperless

Sign Up to Receive an Electronic Version of Cattail Chronicles :

Send us an e-mail requesting the environmentally friendly version of Cattail Chronicles via e-mail to PRatliff@co.lake.il.us or give us a call (847) 377-8030.



In C.F. Johnson's 1896 book Angling in the Lakes of Northern Illinois: How and Where To Fish Them, Timber Lake (called Huntley's Lake at that time) was described as a good fishing lake, particularly for perch, which experienced low fishing pressure because the lake was "further away than the other lakes". This is still somewhat true since the area around the lake has not been heavily developed. In fact, approximately 63% of the lake's watershed consists of agriculture, forest and grassland, or wetland.

Timber Lake is a glacial lake with a surface area of 33.3 acres and a maximum depth of 33.3 feet. A 2007 bathymetric map created by the Lakes Management Unit (LMU) calculated an average depth of 16.5 feet and an estimated volume of 547.1 acre-feet. The water depth drops quickly out from the shoreline, particularly on the west side of the lake. In fact, approximately 61% of the lake is deeper than 10 feet. The shoreline length is one mile.

The LMU sampled Timber Lake for water quality in 1995, 2001 and 2006. Due to the small watershed and limited development, the lake has very good water quality. The lake is generally clear and had an average Secchi disk (water clarity) depth of 10.35 feet in 2006, which is well above the county average of 3.28 feet. Nutrients are low as well. Timber Lake has the 8th lowest average total phosphorus concentration of 163 lakes the LMU has tested since 2000.

In 2003, during a non-game fish survey the LMU with Max McGraw Wildlife Foundation found the Iowa Darter, an endangered fish species in Illinois. The most common species collected were Brook Silverside, Bluegill, Bluntnose Minnow, and Largemouth Bass. Also found during the survey were Black Crappie, Green Sunfish, Johnny Darter, Yellow Perch, and Yellow Bass. Catch and release only fishing is allowed through the LCFPD Raven Glen access.

Timber Lake had a healthy aquatic plant community during the LMU 2001 study, but it is declining due to the introduction and expansion of exotic Eurasian Watermilfoil (EWM). First discovered during the LMU study in 2001 as a small patch of plants near a pier, it has quickly spread to become the dominant plant in the lake. While the lake still harbors 13 plant species, with White Water Lily being the second most common plant, diversity has declined from the 19 species found in 2001. Timber Lake is a good example of where early action by residents could have prevented the spread of EWM and subsequent decline of native species. Action still can be taken to prevent additional species loss and help keep Timber Lake one of the better lakes in Lake County. On the positive side, with the recent and planned improvements to the area by LCFPD, this lake and its surroundings will be enjoyed by the public for years to come.

Spring: Calendar of Events

Wisconsin Lakes Convention 2008
Green bay WI, April 17-19
KI Convention Center

More than Water:
Use dip nets to discover the health of your pond
Adults and children 6 yrs (or older) 5$
Wright Woods, May 31, 1:30-3:00p.m.

Free Boat Safety Inspection
U.S Coast Guard recognized boat safety inspection
Call (847) 381-0669 for event dates and times

2008 Plants of Concern Workshop
Chicago Botanical Gardens, Glencoe IL, April 27
More Information: **www.plantsofconcern.org**

Green Landscaping

By Adrienne Orr

We all live within a watershed which eventually drains into a stream or lake. Therefore, what we do in our backyard will have an impact on the water quality within the receiving body of water. By making a few simple changes to the landscape of our yards, we can reduce the impact to the body of water, as well as time, and money.

Build and Maintain Healthy Soil

Soil should be loose to allow air, water, and plant roots to penetrate the soil.

- Know what your soil needs – Test it! (Contact the local soil and water conservation district)

Compost – loosens clay soil, helps sandy soils hold nutrients and water.

- Create your own out of leaves, flowers, grass, and vegetable matter.

Mulch – stabilizes soil temperatures, prevents weeds, conserves water and helps to feed the soil.

Plant Right for the Site

What kind of soil do I have? What are the main uses of my yard? Is it sunny or shady?

Choosing plants - Native plants can provide a beautiful landscape as well as benefit the environment.

- They are low maintenance, more hardy, and don't require fertilizers.
- Native plants have deep root systems therefore require less water.
- Provide food and shelter for wildlife and promote biodiversity.

Practice Smart Watering

Make use of the rain. Rain water can run off of roads, roofs, and compacted soil which can impact the water down stream. It erodes stream banks and makes water murky, which in turn can harm aquatic life.

- We can help keep this rain water in our own yard by planting rain gardens or using rain barrels to collect rain water.
- Plant native species which have deep root systems to stabilize soils and filter runoff.

Practice Natural Lawn Care

Mow more frequently in order to cut no more than 1/3 of the height of the grass.

- This cuts back on the amount of grass clippings.
- Add grass clippings to compost piles and the use in the garden.

Adopt a Holistic Approach to Pesticides

Beautiful lawns can be maintained without using pesticides.

- Choose plants adapted to the environment
- Diversify plants for fewer problems
- Rotate plants each year
- Water in the morning so plants can dry out during the day
- Know the beneficial insects (lady beetles) which eat insect pests

Save Money

By following the tips listed we can save money. Native plants that are adapted to the environment eliminate the need to water excessively. By diversifying the plants we also eliminate the need for pesticides.

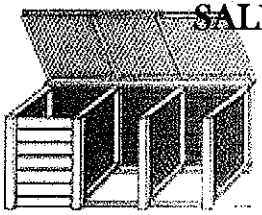
If we all work toward these goals we will not only save money, but we will create a beautiful landscape that is environmentally friendly.

Use Phosphorus free or reduced phosphorus fertilizer. Learn more by visiting our web site **www.co.lake.il.us/health/ehs/lakes.asp**

Rain Barrel & Compost Bin

[redacted]

SALE!!!



11th Annual Native Plant Sale

Independence Grove Forest Preserve, Libertyville

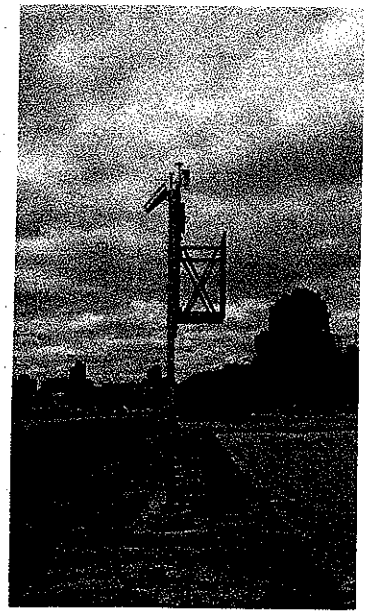
Mother's Day Weekend May 10-Saturday 9 AM-3PM May11– Sunday 10AM-3PM

"Native plants can provide a beautiful landscape as well as benefit the environment". Proceeds benefit "Enviro-Patrol," the youth stewardship education program of the Lake County Forest Preserves. **You can also pick up your ordered rain barrel and compost bin!

Access a free catalog online at **www.LCFPD.org/plantsale**

SwimCast On-Line

By Leonard Dane:



Waukegan SwimCast Tower

As you plan your trip to the beach this summer, wouldn't it be nice to know how warm the water is, how big the waves are, or if it is safe to swim. Starting in the summer of 2008 all of this information and more will be available from three SwimCast monitored Lake County beaches with the click of your mouse.

SwimCast measures air temperature, water clarity, wind direction, precipitation, relative humidity, rainfall, wind speed, wave height, insolation (light energy), and other water quality parameters to help predict when *E. coli* levels are high enough to call for a swim ban. This is very different from the standard method, in which water samples are taken each morning and tested. Using this standard method, it takes 18 to 24 hours to determine *E. coli* levels. This is why swim bans using the standard method are typically a day late. SwimCast, however, can predict *E. coli* levels in "real-time".

SwimCast equipment operates at four of the 11 beaches along Lake Michigan (from Highland Park to Winthrop Harbor) that are monitored by the Lakes Management Unit (LMU). The equipment is installed at Rosewood Beach in Highland Park, Forest Park Beach in Lake Forest, Waukegan South Beach in Waukegan, and Illinois Beach State Park South Beach.

Waukegan and Rosewood Beaches are equipped with a cellular modem which allows the LMU to download the data to the Waukegan office. The data is downloaded every two hours from 8:00 a.m. to 4:00 p.m. In 2007, this data was added to the LMU website **http://www.co.lake.il.us/health/ehs/SwimCastDataAP.asp** allowing anyone to view the data from Memorial Day through Labor Day. This year we hope to have the *E. coli* prediction available on the site also. In addition, the equipment at Forest Park Beach is being upgraded and the data should also be available on the website in 2008.

So before you head to the beach, check the web to check the water temperature, how big the waves are, or even if the beach is open. Enjoy your summer and see you at the beach.

"Change"- that is a theme we are hearing in this year's political races. It is also something that is a reality for the Lakes Management Unit. We say good-bye to two staff members, Shaina Keseley and Adrienne Orr, and hello to Kelly Deem and Jennifer Grzesik.

In December, Shaina accepted a position in her native state of Minnesota with the MN Pollution Control Agency. We will miss Shaina's sense of humor and hard work. Adrienne's departure has been known for some time as she has been taking evening classes to obtain her teaching certification. Adrienne left us in March and immediately began her student teaching at Zion-Benton High School. We will miss her humor as well as her expert editing of *Cattails*. We wish them both the best of luck!

Kelly received her bachelors in Natural Resources Fish and Wildlife Ecology from Northland College in Ashland WI. Her background is in fisheries where she conducted fisheries samples on rivers, streams and lakes in the Midwest. Currently Kelly and her husband James live in Wisconsin with their two dogs and two cats. Kelly enjoys hunting, fishing, hiking and cooking. Jennifer obtained her bachelors degree from the University of Wisconsin Milwaukee in Biology and a masters degree in Biology with an aquatic emphasis. Her experience lies in stream surveys focusing on stream habitat, macroinvertebrates, and fish. Jen enjoys scuba diving, traveling, and being outdoors. She lives in Delavan Wisconsin with her fiancé Andrew and dog Yummy.

Licensed Swimming Beaches: What you need to know (Part 2)

By: Mike Adam

In the fall edition of *Cattails*, Part 1 of this article discussed what a licensed beach is and what is required by state law. I am sure by now any beach not licensed before is planning to do so now. In this article, discussion will focus on what it means when a beach is closed and what are some ways to prevent closures.

As you may recall, to close a beach for swimming (we call it a SwimBan) a water sample has to have an *E. coli* concentration of >235 colony-forming units per 100 milliliters (cfu/100mL). This is based on guidelines established by the U.S. Environmental Protection Agency for recreational waters. What is *E. coli* and why might it be in high numbers?

E. coli actually stands for *Escherichia coli* and is a common bacterium that lives in human and animal intestines. There are numerous *E. coli* strains and most are relatively harmless, causing illnesses (typically gastrointestinal in nature) only when consumed in high numbers. At any time there may also be other organisms present in the water that can make people ill, such as *Campylobacter, Giardia,* and *Cryptosporidium*. However, it is extremely time consuming and expensive to test for all the potential harmful pathogens in the water. Therefore, based on historic studies, *E. coli* is used as an indicator organism. This means research has found that if *E. coli* concentrations are high, so potentially are other harmful pathogens. For a more detailed review of some of these pathogens see the IEPA "Lake Notes: Waterborne Pathogens" at **http://www.epa.state.il.us/water/conservation-2000/lake-notes/waterborne-pathogens.pdf**

There are many ways *E. coli* can end up at a swimming beach. Heavy rainfall and strong winds associated with storms can cause the water to become cloudy with sediment churned up from the lake bottom. Stormwater from rain can also wash in other particles from lawns, streets, and buildings. This sediment and stormwater may contain high levels of *E. coli*. Therefore it is important to use common sense and good judgment anytime you swim in natural waters. If the water does not look inviting, don't swim. If there was a heavy rain event last night, don't swim. However, high bacteria levels can be very localized. If a water test comes back high in *E. coli*, it may still be safe to swim in other parts of the lake. If there are multiple beaches on the lake (for example, Bangs Lake in Wauconda) it is extremely rare that all of the beaches around the lake would have high bacteria counts at the same time.

While most of Lake County is served by sanitary sewer services, some portions of the county still use septic systems. Many of these septics can be found near and along the shorelines of some of our lakes. Summer cottages, built in the post World War II era, later became year-round residences. They had septic systems designed for part-time use. Aged and overused systems are a potential source of bacteria, viruses, and protozoans to lakes. Proper maintenance of these systems is important to public health throughout a lake's watershed.

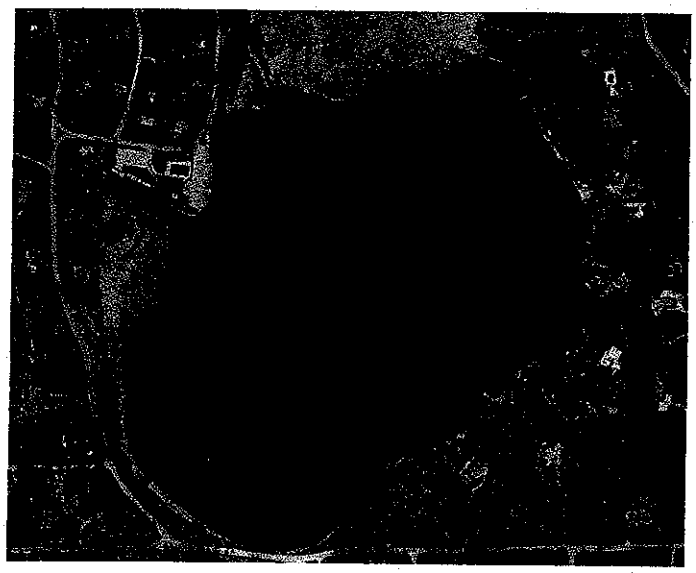
Another source of *E. coli* contamination is the feces of gulls, geese, and other wildlife. Beach habitats, with the flat smooth surface devoid of any vegetation, coupled with swimming platforms, piers, and other surfaces, all adjacent to manicured lawns provide an ideal location for some of these animals. In these urban environments geese and gulls can congregate in large numbers and make quite a mess on beaches and piers. Beach managers and residents are strongly encouraged to clean the beach and piers of feces daily (pick up and discard, do not sweep the feces off the pier and into the water!). These birds may also need to be discouraged from using the beach area through a combination of techniques such as lines of string, streamers, dogs, etc. However, harassment of these birds needs to abide by local, state, and federal laws protecting migratory bird species. Check with local officials, as well as the Illinois Department of Natural Resources, before implementing a harassment program.

Often, swimming-related disease outbreaks in Illinois have been associated with fecal discharges from swimmers. Here are a couple other good tips:

-If you are sick, DO NOT swim
-DO NOT drink the water while swimming
-Children who are not toilet trained should wear tight-fitting rubber or plastic pants
-Practice good hygiene, take a shower before entering the water, and have the kids take frequent bathroom breaks
-Wash your hands after exiting the lake

A common question that arises when beaches are closed is, "are the fish safe to eat?" Fish consumption advisories are issued by multiple state agencies, not the LCHD. However, these advisories are for chemical accumulation such as PCB's and mercury. If you would like more information, please visit **http://www.idph.state.il.us/envhealth/factsheets/fishady.htm**. In general, the fish should be safe to eat, since the pathogens that may cause illness in humans should be killed if cooked properly. Hopefully this article will not scare anyone away from using one of our beaches this summer. Practicing common sense and good hygiene will go a long way in preventing illnesses. In addition, licensing these beaches through the state and having LCHD monitor bacteria levels are an important part of protecting public health. If you have questions about your beach, please contact us at (847) 377-8030.

Can You Name This Lake?



Clues

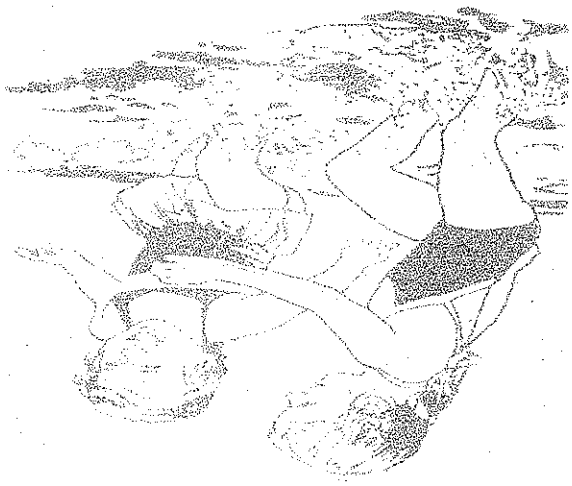
There is a ***buzz*** about this ***sweet*** 66 acre glacial lake located within the Flint Creek Watershed. It is located in the Village of North Barrington and is scheduled to be sampled by the LMU in 2008. Name this lake!

Lakes Scheduled to be Sampled in 2008

Bangs Lake*
Cedar Lake*
Countryside Lake*
Cranberry Lake*
Deep Lake
East Loon Lake
Echo Lake
Flint Lake
Grassy Lake
Honey Lake
Lake Louise
Lake Zurich
Little Silver Lake
Long Lake*
Sun Lake
Third Lake*
West Loon Lake
Wooster Lake*

* Sentinel lakes monitored annually, 2005-2009

Inside:
Updated Information for
Your Trip to the Beach



LakeCounty
Health Department and
Community Health Center

Environmental Health Services
3010 Grand Avenue
Waukegan, IL 60085

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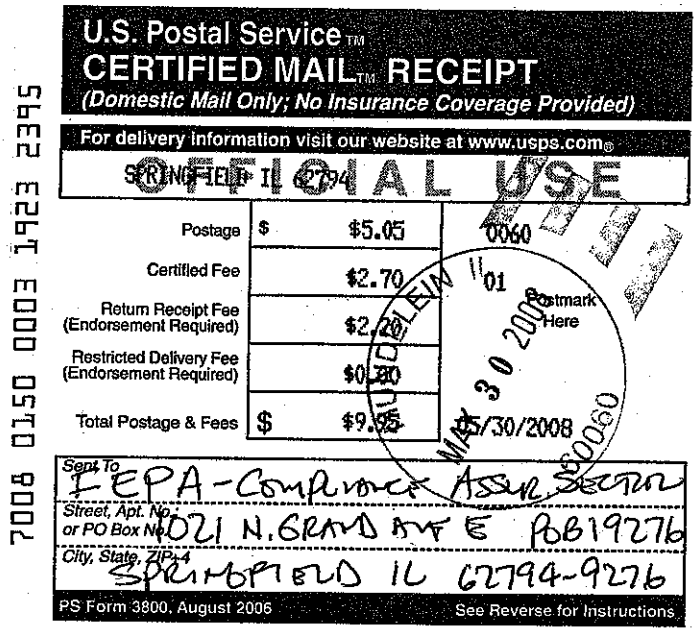

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Certified			$2.70
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Issue PVI:			$9.95
Total:			$9.95

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Account #: XXXXXXXXXXXX2695
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